

# THE MODERN HOSPITAL



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## How to Make Modern the Old Well Built Hospital

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Architect, Boston

**I**N THESE strenuous times of economic discontent when little money is available for new building projects, every hospital is wondering how it can meet the demands brought about by the advances in medical science and in the technique of caring for the sick.

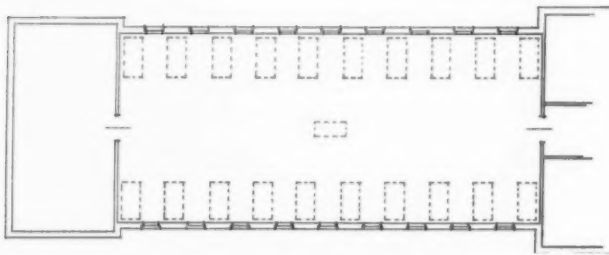
Hospitals planned a decade ago often fail to meet present day demands. These hospitals, although well built and planned with careful consideration of the needs of the day when they were built, do not function with the efficiency demanded today. Some of them were planned when the one-story pavilion seemed to be the "last word," with a separate building for men, for women, for children, for obstetric cases, for operating and for every department, all connected by miles of corridors, with long horizontal distances to be traversed for the carrying of food and supplies. This pavilion type of institution was useful in enabling the patients to be taken quickly into the open air or onto the grounds. Such buildings are adequate in many ways and may be simply replanned and made to function efficiently.

If the foundations and walls are sufficiently strong, additional stories may be added. It happens often that the lines and particularly the width

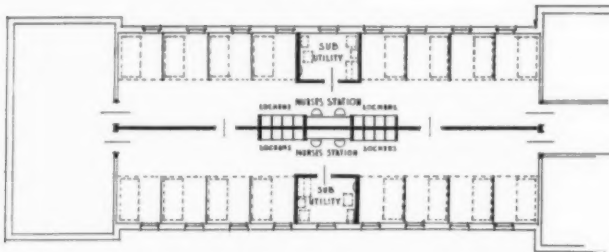
of the pavilions are uneconomical from the standpoint of modern planning, but because of the substantial construction the buildings must be salvaged and used. The problem the hospital architect must face is how to get the most out of these fine buildings for the least expenditure of money. It goes without saying that if we were planning for the same number of patients today, the patients who now occupy six to ten buildings would be housed in one building, and in a more efficient manner. But the expansion program that might have been laid out along these lines must be abandoned, temporarily at least, in favor of a less expensive program.

Some of the improvements that may be made are: (1) subdivision of the large wards into smaller units; (2) planning for an improved maternity unit; (3) improving the surgical and operating facilities; (4) providing sound absorption for noisy portions of the buildings; (5) simplifying and improving the heating system; (6) improving the condition of floors.

Let us take a plan of a hospital built ten or twelve years ago as a text. The ward unit of eighteen or twenty beds could be changed into two six or eight-bed unit cubicle wards with subutility



*The twenty-bed ward shown in the top drawing was effectively subdivided into cubicles and utility rooms, as shown below.*



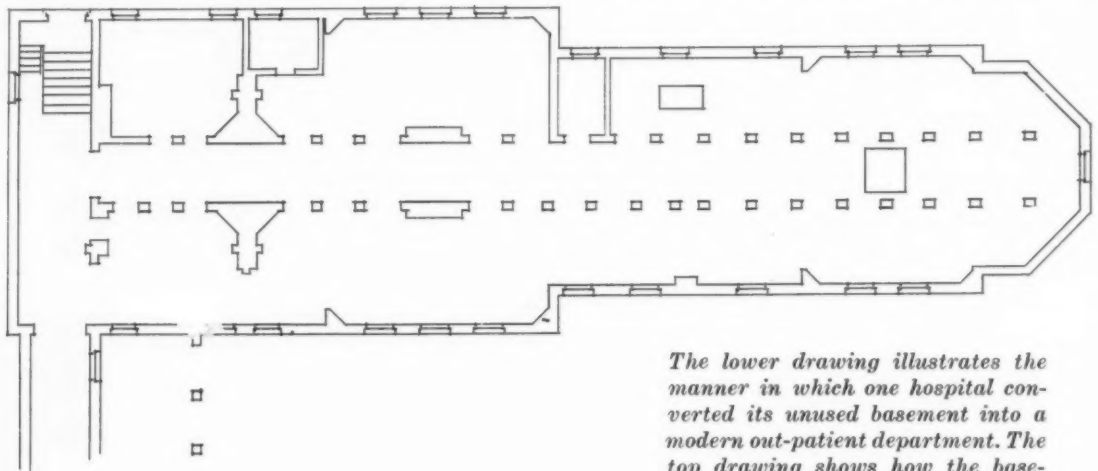
rooms, at once giving the semiprivacy that is demanded today, and making the open ward a semi-private section, supplying the great intermediate class with ideal facilities for care and group nursing. Such a ward not only gives privacy to the patient but makes possible one hundred per cent

efficiency in the care of the patient, as all of the ward service (with the exception of the service of food) is carried on inside the walls of the ward. The nurses' station inside the ward is within full view of the corridor, and in the subutility rooms are the hot plate, the bedpan hopper, the sterilizer, the sink and all necessary equipment.

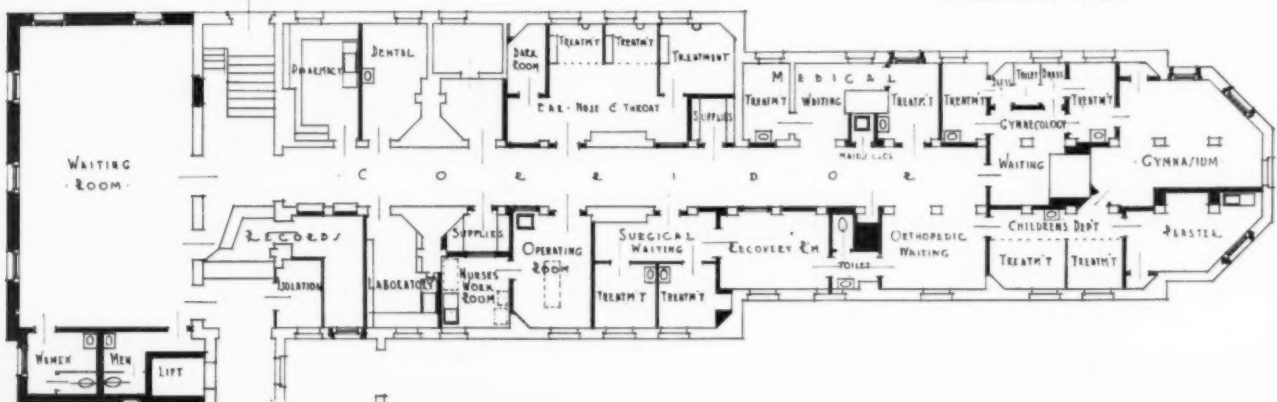
The utility rooms could be greatly improved; a visitors' waiting room would be a desirable addition; the general nurses' station could be combined with the linen and medicine closets, facilitating the service and saving the steps of the nurse. It is true that the number of beds may have been reduced, but the efficiency gained offsets this.

The maternity department has been found one of the most profitable in the hospital and many hospitals which may not have provided this department at the start are forced to add this to meet the demands of the public. I was recently called upon to plan such a unit for an existing hospital and was able to make quite a creditable showing at a small expense by using some storerooms and an unused balcony.

In almost every hospital built a decade ago there is a dearth of operating rooms. Fifteen years ago I visited one of the leading hospitals of Europe and found that all of the operative work was being

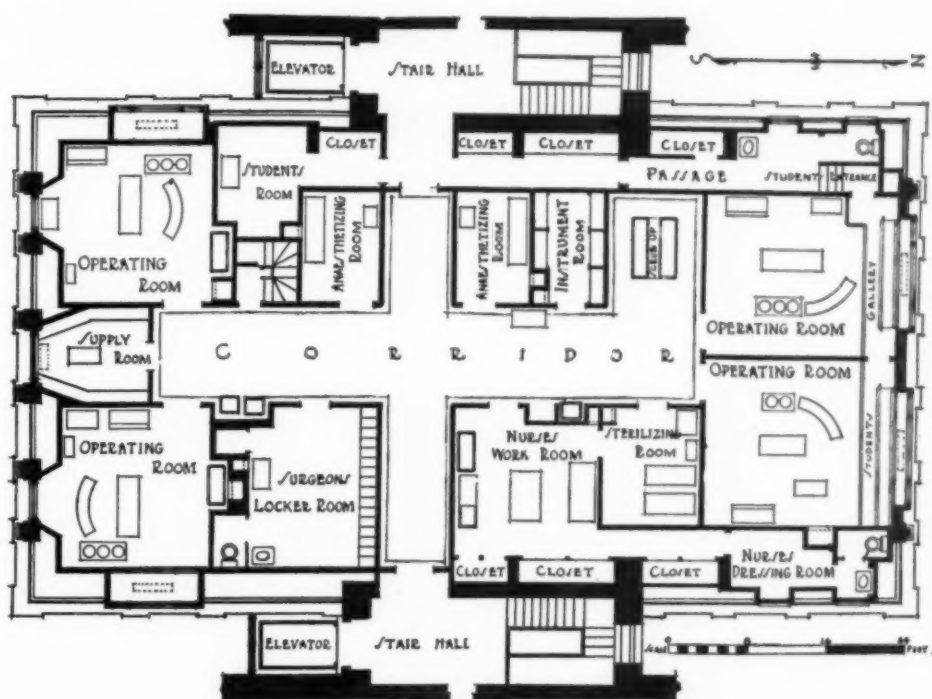


*The lower drawing illustrates the manner in which one hospital converted its unused basement into a modern out-patient department. The top drawing shows how the basement appeared before the alterations were made.*





*New York City Hospital, New York City, constructed this complete operating department in an unused roof space in the building.*



carried on in two operating rooms. Last year, in consulting on a new hospital to be built in the West, I was told that there were over seventy-five surgeons who would operate at that hospital and that enough operating rooms should be provided in the new plans so that they might all have a chance. In the new Springfield Hospital, Springfield, Mass., which has 325 beds, there are eight major operating rooms, also four for orthopedic and head operations, two completely equipped accident rooms and a special operating room for the out-patient department.

In the older hospitals there often exists roof space which may be converted into ideal rooms. For example, in one of the leading hospitals in New York City, the kitchen which was in the roof space was made into a satisfactory operating department.

With modern artificial lighting, the operating rooms may be placed on any floor, as the skylight is not considered necessary.

One rarely goes through a well built hospital erected ten or twelve years ago without hearing a complaint about noise. The acoustical engineer is a comparatively new adjunct, as sound absorption was little known until recently and in its earlier form was prohibitive in cost. Today the ceilings of our corridors and noisy rooms may be treated at a reasonable cost with one of the simpler plastic absorbent materials, priced as low as forty to fifty cents a foot, and this can readily be applied to the old ceilings. The contrast between the sound-proofed hospital and one not so treated is so great that it is easy to comprehend the added comfort.

A practice common ten to twenty years ago, in the heating of wards particularly, was to have large heating chambers in the basement with indirect radiators, occupying valuable space which could be used to great advantage for other purposes. Today a much simpler heating system is used. The old heaters can be removed and small

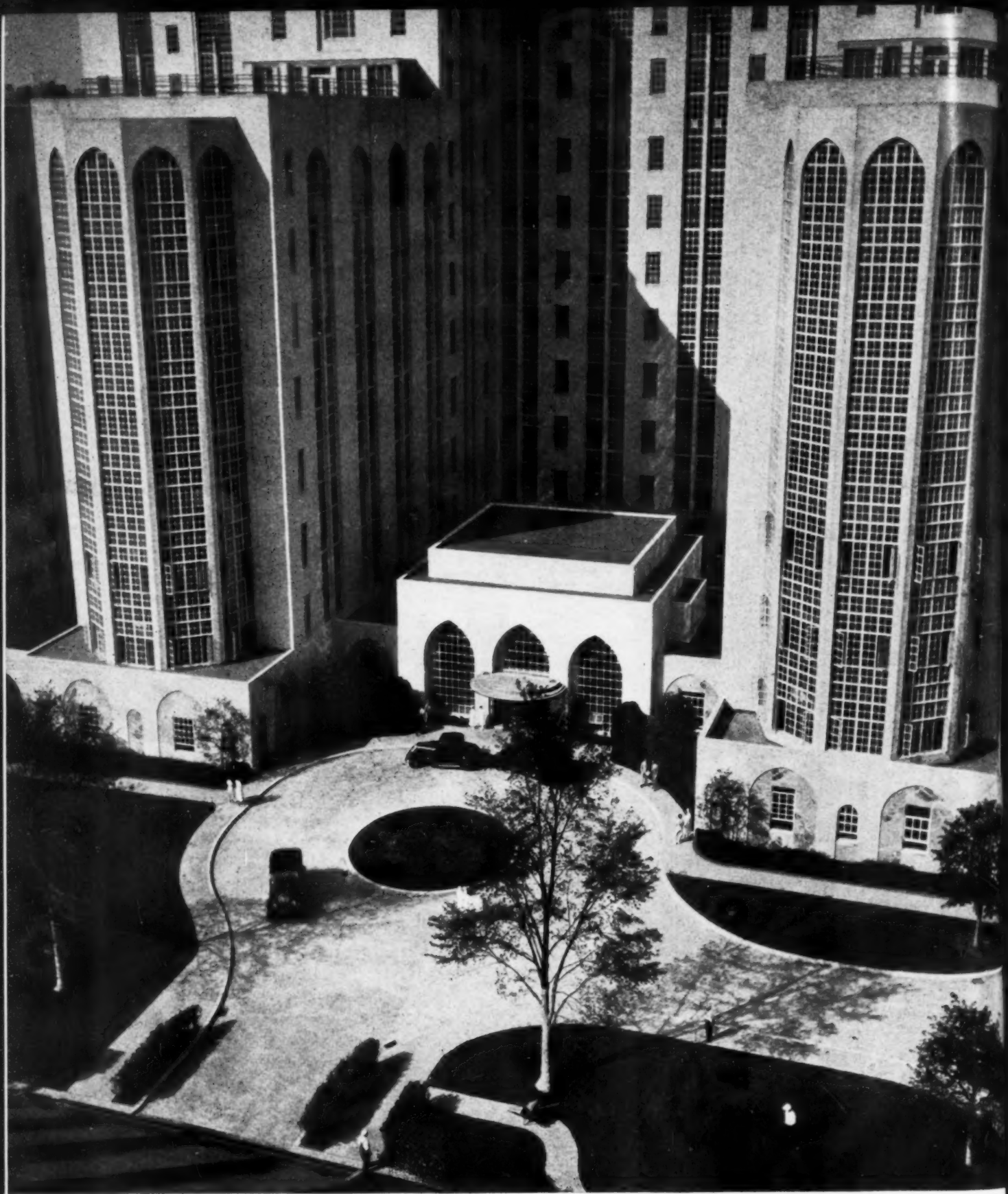
direct radiators used in the wards and rooms. With the later system of zone control, that is controlling the steam pressure in the various parts of the building, the temperature in rooms with a southern exposure could be kept below the 70° F. that might be required in rooms with a northern exposure. With the zone control the steam pressure can be governed locally to meet the needs, resulting in a saving of from 10 to 20 per cent in heating and giving a better living temperature.

While the well built hospital of a score of years ago may have had a substantial floor of tile, marble, magnesite or some other material, the constant wear and deterioration often made it necessary to renew the surface. Many suitable floor materials have come on the market in recent years, which may be used with economy and which ensure a hygienic condition of the floors. Some of the mastic tiles in various tones give at once the desired color effect and a good wearing surface. Linoleum, one of the oldest of floor coverings, is still preferred by some consultants, and even the rubber tile has been so reduced in price as to place it among the economical floor coverings.

Many improvements such as painting, polishing, pipe covering, grading, planting of shrubs, may be done by the regular hospital staff. No treatment so greatly improves the appearance of a room or ward as the judicious use of paint.

Unused basements may often, at small expense, be developed into out-patient departments.

These improvements should be made in such a way that when prosperity returns the main expansion program may be carried out.



*This is a view of the main entrance to the New York Hospital-Cornell Medical Center, as seen from the roof of the Rockefeller Institute. The beautifully landscaped grounds, the circular white driveway and the solid tiers of solariums, veritable turrets of glass, present a most striking picture.*

# Vast New Medical Center Guards New York's Health

*The designers of the New York Hospital-Cornell Medical Center were faced with what seemed an insurmountable task in their determination to preserve the individuality of the various units, and at the same time effect a closely knit organization. How they achieved this end is told here*

**A**CITY in itself, devoted exclusively to the care of the sick, to teaching and research in all the important branches of medicine, New York's new medical center now rears itself to majestic heights on the banks of the East River.

Eleven buildings in all comprise this modern health center, covering six and one-quarter acres and boasting a daily population of some three thousand persons, including professional personnel, patients, students, employees and visitors. Such is the new home of the New York Hospital and the Cornell University Medical College.

Against the drab background of the city's east side tenements the buildings stand out impressively, gleaming white with layer upon layer of solariums forming veritable turrets of glass. At their very doors flows the river, quietly, restfully, in marked contrast to the din of activity from adjacent crowded city streets.

A single structure rises high above the others and dominates the cluster of buildings. Twenty-seven stories high it stands, a monument to the



By RAYMOND P. SLOAN  
New York City

160 years of effort that have been spent to provide New York with a great health center. The lower eleven floors constitute the general hospital for medical and surgical patients. The next six floors are devoted to facilities for private patients. The floors at the top are the living quarters for the resident staff of the New York Hospital.

To the east of this central building and joining it are two others—the Woman's Clinic, which now houses the old Lying-in Hospital, and the Children's Clinic. Also to the east and south, and connected to the other buildings by underground tunnels, is the Payne Whitney Psychiatric Clinic, a modern structure for the treatment of nervous and mental diseases. Adjoining the general hospital on the west is the Cornell University Medical College. This building is seven stories high, and each floor connects with the general hospital. The Nurses' Residence and School of Nursing is also connected with the main hospital by a tunnel.

Provision is made for more than 1,000 beds, with facilities for the treatment of a comparable



number of dispensary patients. There are residential accommodations and educational facilities for 500 undergraduate nurses. There is educational equipment sufficient for 300 undergraduate medical students and for a large number of graduate students. It is a vast organization which might, by very reason of its size, become unwieldy were it not for the manner in which it is broken down into small workable units. Each of these small units fits into the general organization plan, yet maintains its separate identity.

#### *Ward Patients Ensured Privacy*

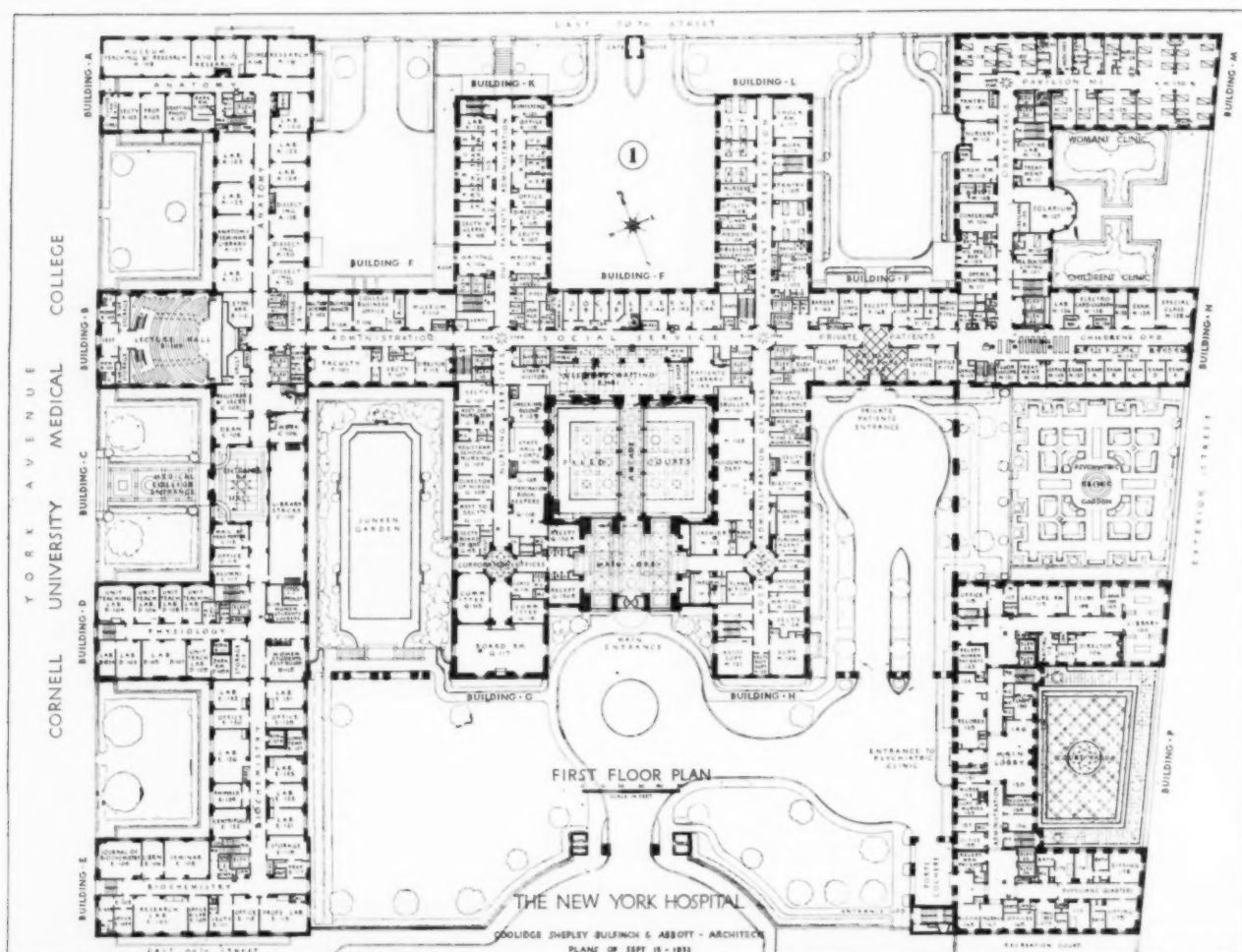
One of the outstanding features of the New York Hospital unit, in fact, is the intimate feeling it creates, despite its magnitude. This is clearly demonstrated in the private pavilion. While an integral part of the whole project, the pavilion affords a privacy that is unusual for a city hospital. Patients in this section of the building are afforded a maximum amount of sunlight and fresh air. Convalescent patients have a splendid view of the East River and the city. The pavilion has a separate entrance in a court on the ground level, which is served by a direct automobile approach.

Each floor in the private pavilion is provided

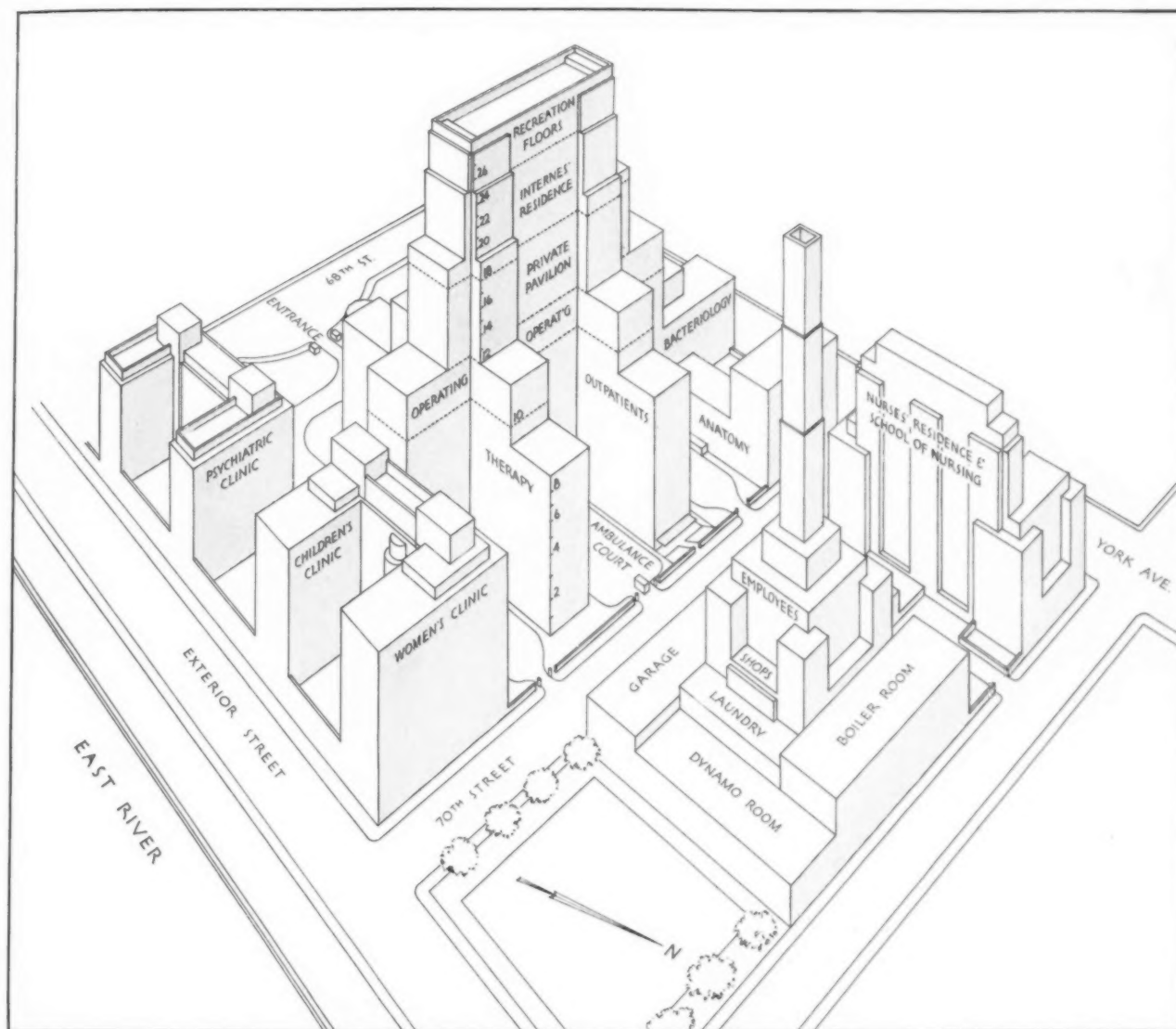
with separate reception rooms for the patients and their visitors, and with solariums. The pavilion has its own kitchens and service facilities as well as a special dining room for visitors. There are ninety-nine rooms on the six private patient floors, approximately one-third of which are equipped with private baths. Each of these floors is attractively decorated in its own individual color scheme.

The ward wings, too, reveal the study that has been given to ensure individual treatment to the patients who cannot afford to pay for the private facilities. No ward unit contains more than sixteen beds, and each group of four beds is separated by glass partitions. In addition there are four-bed, two-bed and one-bed rooms in the ward section. Each bed is equipped to ensure privacy when the patient desires it. At the end of the two southern wings on each floor there are large solariums where the patients may enjoy a view of the river and of the skyscrapers of Manhattan.

The study of the arrangement of the various divisions was carried on in block form by plans and models. The relation of the various divisions to one another and their orientation were carefully considered. It was determined for each division whether a north or south exposure or a view







Courtesy of the Architectural Forum.

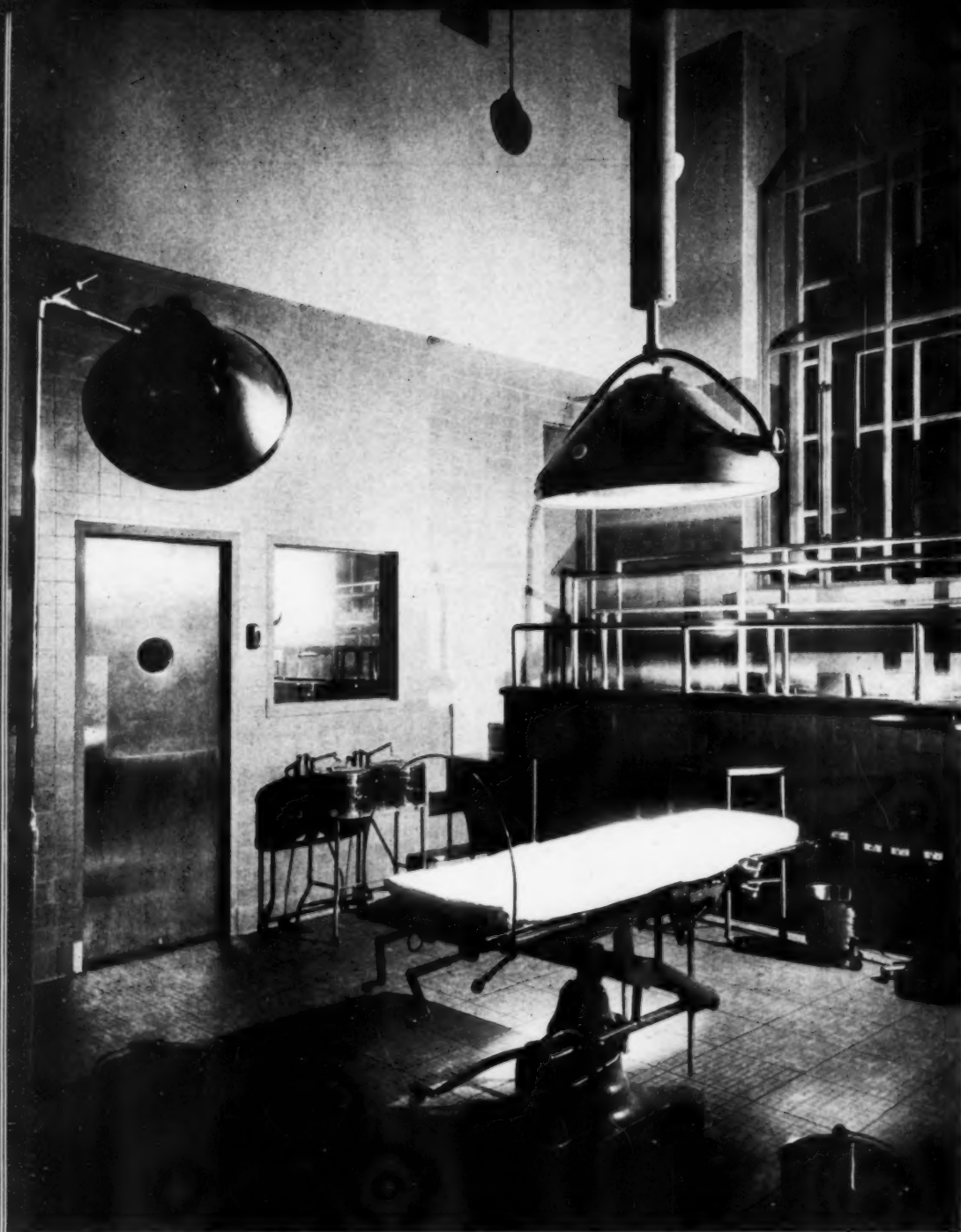
of the river was best. The main hospital was always considered first, then its relation to the medical school on the west and the special hospitals on the east, and then the relation of this group to the other buildings on the north block. Thus the main hospital is a long building running east and west in the center of the group. The two ward wings extend toward the south and the Psychiatric Clinic, the Children's Clinic and the Woman's Clinic overlook the river.

#### *Separate Wing for Out-Patient Department*

Careful attention was likewise given to the depth and width of the courts, to the setbacks of the higher portion of the building so as to admit light to the lower part, and to the general architectural effect of the mass. Certain elements that in the past had been found most difficult to deal with were attacked first. These included the solariums, the operating rooms, the entrance lobbies and the piping and ventilating systems.

It was decided to handle the solariums as glass bays applied to the outside of the building instead of making them an integral part of the structure. It was estimated that the windows in the operating rooms would need to be ten feet wide for ideal lighting, and the fenestration studies were started with this in view. Other fenestration requirements were as follows: 12-foot spacing for the private rooms; 20 or 10-foot spacing for the ward units; 8-foot spacing for the dispensary examining rooms, and 13-foot spacing for the medical school laboratories. It was decided to run the heating and plumbing pipes up the outside walls, and to run the electric conduits and ventilating shafts in the corners beside the corridors inside the building.

A feature of the layout that deserves particular attention is the manner in which the out-patient department is handled. The out-patient department is a separate wing that extends north from the main hospital. Thus, whereas to all intents and purposes the out-patient department is a sep-



*Each of the nineteen operating rooms is equipped with huge lights that cast no shadows, and an air conditioning system.*

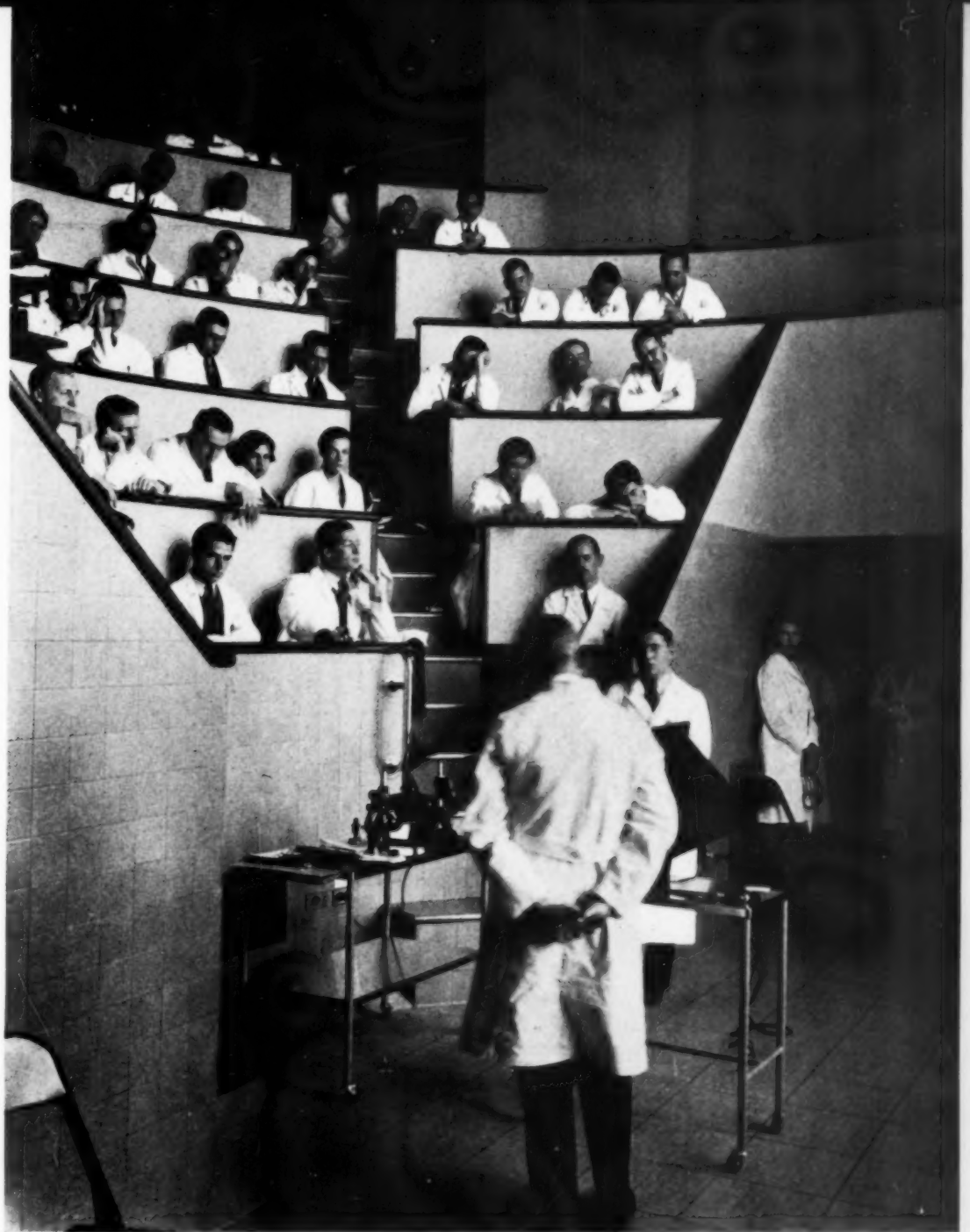
arate building, still it permits of easy access to the clinical laboratories and wards on every floor. Further advantage has been taken of this feature by placing on each floor of the out-patient department the type of service that corresponds to the ward service in the hospital on the same floor. That is, the out-patient administration is on the same floor as the hospital administration; the out-patient medical departments are on the same floors as the hospital medical wards, and the out-patient surgical departments are on the same floors as the hospital surgical wards.

The main dispensary entrance and the waiting and sorting rooms in the out-patient department are on the same floor, and are conveniently near the main pharmacy, the central record room, the social service office and the admitting office.

The special departments, such as x-ray and hy-

drotherapy, that have to do directly with the patient, are in a similar wing that runs north opposite the east ward wing. These departments are so large that they could not otherwise have been provided for except on a separate floor or in the basement. In the basement of this wing, which may be called the therapy wing, is the accident ward. There is an entrance at the grade level, and the accident ward is convenient to the dispensary, the admitting department and the record room. On the first floor of the therapy wing is the receiving ward, which is adjacent to the administration department. The next seven floors above contain the following services: x-ray, hydrotherapy, physiotherapy, dietotherapy and occupational therapy. These services are thus immediately accessible to all the ward floors and to the private patients.

*This surgical amphitheater is one of the many facilities that have been provided for teaching students in the medical college.*



With the activities of the out-patient department and those others taken care of in the therapy wing removed from the basement and sub-basement of the main hospital, it was possible to handle adequately the four great services that properly belong in the basement, that is, food, storage, employees and records.

The food service and the employees' service are in the sub-basement, under the dispensary and therapy wings. The ambulance court separates the two services. The main kitchen is under the ambulance court. There are no windows in the main kitchen. Advantages of this arrangement are better control of loss by theft, the elimination of odors by ventilating ducts that exhaust on the roof high above the patients' windows and complete absence of noise.

All supplies come from the main storerooms

through a tunnel to the food preparation rooms, which are under the dispensary wing. The supplies are received and issued as broken stores from the "issue" room, which is where the tunnel enters the building. The raw food enters the main kitchen from the north. The prepared food is served from the south end of the kitchen into the main east and west corridor, where it is taken to the various wards, both in the main hospital and in the special hospitals in the groups of elevators that serve these wards.

In addition to the main kitchen, there are kitchens in the Nurses' Building, the Psychiatric Clinic, the private pavilion and the staff quarters. The private pavilion, the psychiatric clinic and the staff kitchens receive their bulk supplies from the main kitchen.

Approximately 2,188 persons, including employ-



ees, petty officers, special nurses, ward patients in the main hospital, in the children's clinic and in the Woman's Clinic, medical students and out-patients are fed from the main kitchen. About 500 persons are fed from the kitchen in the Nurses' Building; 143 from the private pavilion kitchen in the main hospital; 127 from the staff kitchen in the main hospital and 111 from the kitchen in the Psychiatric Clinic.

#### *Operating Rooms Conveniently Grouped*

The sub-basement under the therapy wing, on the east side of the kitchen, is devoted principally to employees, who arrive by a special tunnel from the employees' living quarters. The employees are thus completely shut off from all places where food is being prepared and they can be segregated in this section with their dining rooms and locker rooms, without interfering with or congesting any of the other services.

The central record room is in the basement, just south of the main stem between the two ward wings on the central axis of the main hospital. The room is 85 by 100 feet, and there is ample provision for the study of records immediately adjacent. The dispensary entrance, the social service department and the accident department across the corridor on this floor provide a desirable grouping.

There are two operating floors, the tenth and

eleventh. They are immediately above the ward floors of the general hospital and just below the private pavilion. There are nineteen operating rooms, each of which is equipped with huge lights that cast no shadows, and a conditioning system by which freshly washed air is tempered to the various needs.

The operating rooms on the tenth floor are for ward patients only. The east end of the eleventh floor, where the private patients' elevators make contact, is arranged as a private patients' operating suite. The chief surgeon and the operating staff, therefore, have only one floor to go in moving between the public and the private operating rooms instead of, as in many institutions, having to go to another building. With this arrangement the chief surgeon is in immediate touch with both operating services, and the same nurses and anesthetists may be used for both services.

The Children's Clinic and the Woman's Clinic have entrances on a ground level basement instead of on the first floor. Both the woman's and the children's out-patient departments are separated from the main out-patient department. This arrangement is considered desirable as both of these departments are under the supervision of the chiefs of staff of the Woman's Clinic and the Pediatric Clinic. Again it has been possible with these clinics arranged as they are to make each one a self-



*The main kitchen is a busy spot. There are no windows. Odors are eliminated by means of large ventilating ducts that exhaust on the roof high above the patients' windows. The absence of windows also eliminates noise.*





*The gleaming white buildings of the big medical center stand out impressively against their drab surroundings. The East River flows quietly in the background in contrast to the din from adjacent crowded city streets.*

contained unit, and still provide direct access to the main hospital on every floor so that the clinics can use the special services.

The Psychiatric Clinic is connected by tunnels both with the main hospital and with the Pediatric Clinic at the basement and at the sub-basement levels, which provides all the connection that could possibly be desired. This gives direct access to the out-patient department, the food service, the record room and the main storerooms, and a direct, enclosed passage for students from the medical school and for doctors from the staff quarters.

Each of the five clinical units containing the departments of medicine, surgery, pediatrics, obstetrics and gynecology and psychiatry are provided with facilities for medical instruction and with laboratories for medical research. Lecture and conference rooms of various sizes have been provided, and there are small laboratories where medical students carry out some of the routine study of their patients. In each clinic extensive provision has been made for the special laboratory studies especially required by that clinic in the investigation of its patients and in the development of new medical knowledge by scientific research.

In the main hospital there is a series of central laboratories that serve both the in-patients and

out-patients where bacteriologic, serologic and chemical examinations are carried on and where electrocardiograms, basal metabolic rate determinations and other diagnostic procedures are centralized.

The Cornell University Medical College, although preserving its physical identity and being further subdivided into self-contained institutes of biochemistry and pharmacology, physiology, bacteriology, pathology and anatomy, is directly connected on all its floors with the main hospital.

The main entrance of the hospital takes the form of a spacious one-story lobby between the two ward wings. Its richly colored marble floor extends into the deep reveals to the windows, which reach to the floor and flood the room with light. The secondary motif is the low dado of warm crab orchard stone that is cut by the windows but which mounts to the top of three windowless arches. The history of New York Hospital is carved in the central arch. In the east arch are the names of the donors of endowed beds, and in the west arch are the names of several hundred benefactors. The entrance lobby has been planned with the idea that the average person will pass through without noticing it, but that the cultured person will immediately be arrested by its beauty.

The corridors run from the lobby east and west

to the two ward wings. On the first floor of the east wing are the general hospital administration offices and the accounting department. These connect at the north with the patients' reception room in the therapy wing. The private patients' entrance and administration section are adjacent, to the east, in the main stem.

The corporation offices and the nursing service administration quarters are on the first floor of the west ward wing. This wing is adjacent to the administration quarters of the out-patient departments on the north, and the administration quarters of the medical college on the west.

Visitors to the wards enter through the main entrance lobby and pass directly through an arcade to a large visitors' waiting room, which opens on to a lobby in front of the visitors' elevators. There is a floor clerk near the elevators on each floor. A separate inside corridor connects the two ward wings and allows visitors to go to either ward wing without passing through the main corridor.

Precautions have been taken to eliminate the ordinary handicaps inflicted by so large an organization. A system has been adopted for assisting persons to find their way about the buildings. To accomplish this special arrangements have been made at the points where one corridor crosses another. The steel columns of the building are arranged so that the corridors, which are normally eight feet wide, are increased to ten feet at the crossings. The ceilings are paneled and provided with special corridor crossing lights, on which there are direction signs. There are ten-foot black squares on the floors, inlaid with a rose colored marine compass on which the four principal points

are lettered. There are five principal corridor crossings in the main hospital, these being colored green, red, blue, yellow and white. Each crossing star is the same color on every floor. A guide service of trained young women is available to visiting hospital superintendents and the general public.

Several other means have been taken to make each wing a self-contained unit. The numbers on the doors in each wing are preceded by a letter identifying the wing. Each wing has its own elevators and stairways, and its own distinctive corridor floor pattern. Twelve distinct floor patterns have been worked out. Each vertical section of the building, between corridor crossings, has its own pattern. The horizontal divisions are also indicated by colors. The medical floors, which are the second, third and fourth, are laid in two shades of gray tile. The surgical floors, the fifth, sixth, seventh, eighth and ninth, are laid in two shades of green tile. The operating floors are laid in blue tile and the medical college floors in red tile.

Because of the size of the buildings the introduction of a dependable doctors' call system represented a problem. This was finally solved, however, by zoning the buildings for purposes of doctors' calls. If a doctor leaves his zone without telling where he is going, no attempt is made to find him. In other words, a doctor serving in the Woman's Clinic is called in the Woman's Clinic which is treated as a zone, and if he is not there no further search is made for him. But if he leaves word that he is going to the private pavilion he is called on the private pavilion zone. Soft speakers are used to call the doctors. These speakers can be heard ten feet away, but do not disturb the patients.

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## A Practical Operating Plan for the Small Library

The purpose of a medical library in a hospital should be to provide the intern and house staff with a working collection of the latest authoritative textbooks and well recognized reference works in the various branches of medicine. The collection should be kept up to date by the addition of new editions and new essential special works and monographs deemed worth while for such a library.

A suitable room should be set aside especially for library purposes. It should be conveniently located in the building as near as possible to the center of the institution's activities, the administration offices or the assembling point of the attending staff, where it would be most readily accessible to both the interns and the medical staffs.

A competent person, preferably one having some experience, knowledge or ideas regarding library service, should be placed in charge and should be on constant duty during the hours the library is open for use. The publications of the library should not be available for consultation unless the librarian or some other responsible attendant is present

to exercise control over their use. Books should not be removed from the library except for the interns to use in their rooms during the hours the library is closed, and then only upon the signing of a receipt by the borrower.

When the collection is small, a simple and practical arrangement is to classify the books in alphabetical order according to the main divisions of the branches of medicine. The books are to be arranged on the shelves alphabetically by author under each division. All books and monographs should be catalogued under author and subject. The author card should contain the following information: the author's full name, title of the book, edition, number of volumes (if more than one), place of publication, name of publishers, date and size. On the back of the author card should be typed the subject under which it is catalogued and classified, and the accession number.

The subject card should contain the subject heading which most accurately fits the contents of the book. Some works, while they obviously can be classified on the shelves under only one branch of medicine, require indexing under more than one subject. The subject card should also contain the author's name and initials, title of the book, edition, number of volumes, place of publication, date and size.



## A County Infirmary Designed in the Modern Manner

By S. FIRESTONE

Architect-Engineer, and

S. S. GOLDWATER, M.D.

Hospital Consultant, New York City

MONROE County, New York, of which from a population standpoint the great industrial city and cultural center of Rochester constitutes the major part, began some years ago the development of a series of model county institutions for the destitute and the sick. The Monroe County Home Infirmary, the plan of which is here presented, is part of this general program.

The erection of a new county infirmary was ordered by the board of supervisors because the existing plant is ill-suited both in size and character to present and to future needs. The fire hazard is a source of anxiety and in the present building the county authorities have been forced to use for ward purposes basement space that is hygienically unacceptable. Not only is the existing infirmary overcrowded but the local social agencies have testified to the scattered existence in the community, outside of the institutions maintained by the county, of a large number of chronic patients for whose care the county acknowledges its moral responsibility but for whom hospital beds are not now available. The city of Rochester is, however, well supplied, in its municipal hospitals and in a group of important and progressive

voluntary institutions, with hospital facilities for the care of the acutely sick, and it is not the policy of the county supervisors to have the county infirmary compete with these well equipped and vigorously conducted institutions.

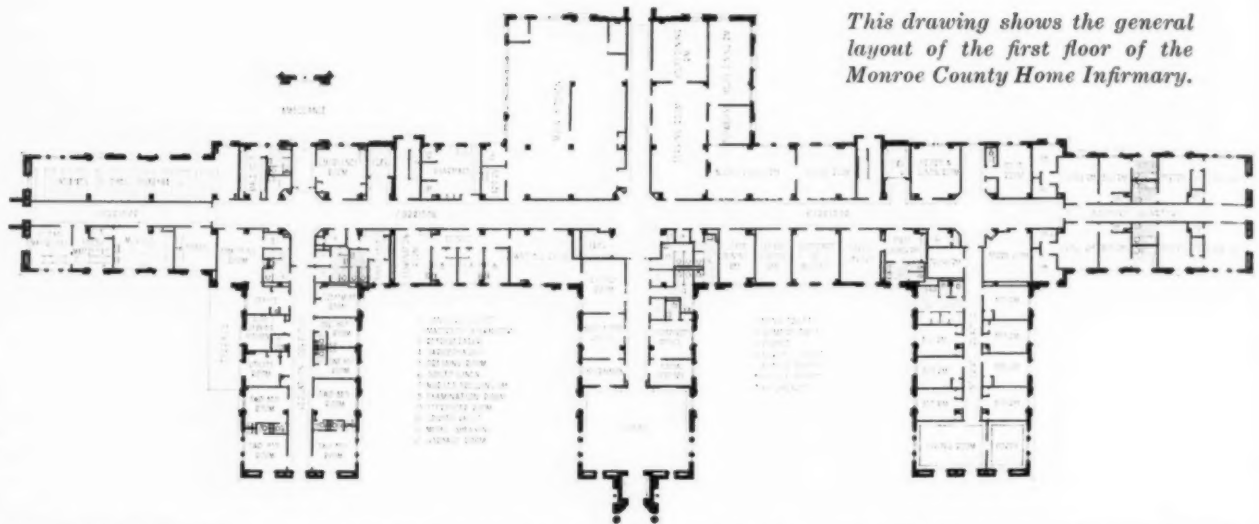
A study of the county infirmary's patients showed that while the clinical work of this institution does not compare in intensity with that of the local voluntary hospitals or of the municipal hospitals of Rochester, the requirements are such as to call for a number of clearly differentiated clinical departments and for diagnostic and therapeutic facilities resembling in kind, though not in degree, those needed in a general community hospital.

### *Operating Rooms on Sixth Floor*

The new building on its completion will have a normal capacity of 446 beds, a number that can be considerably increased by the utilization of the spacious porches as ward extensions. The supervisors have decided to leave a section of the fifth floor unfinished, thus reducing the initial equipment to 366 beds.

The ward service is concentrated on the second, third, fourth and fifth floors. The only patients'





*This drawing shows the general layout of the first floor of the Monroe County Home Infirmary.*

beds on the first floor are those in the contagious ward, which is so planned that its service can be conducted with all the safeguards normally found in a completely detached isolation hospital.

The diagnostic and therapeutic facilities, concentrated on the sixth floor, include a major and minor operating room and their accessories, an eye, ear, nose and throat examination and treatment room, a clinical laboratory, the department of radiology with separate rooms for radiography, fluoroscopy and radiotherapy, a room for dentistry and modest quarters for metabolism and cardi-

ography. The sixth floor covers the central stem of the structure only, leaving free the roofs over the six wings of the building, three to the south, one each to the east, west and north. Two decks have been partly covered over for patients' use and two additional open roof spaces have been finished for the use of male and female patients respectively.

The basement, restricted in area, contains storerooms only. Power is supplied from the new county power house and the infirmary structure will be supported by a group of service buildings



*This is the isolation wing, which is on the first floor.*



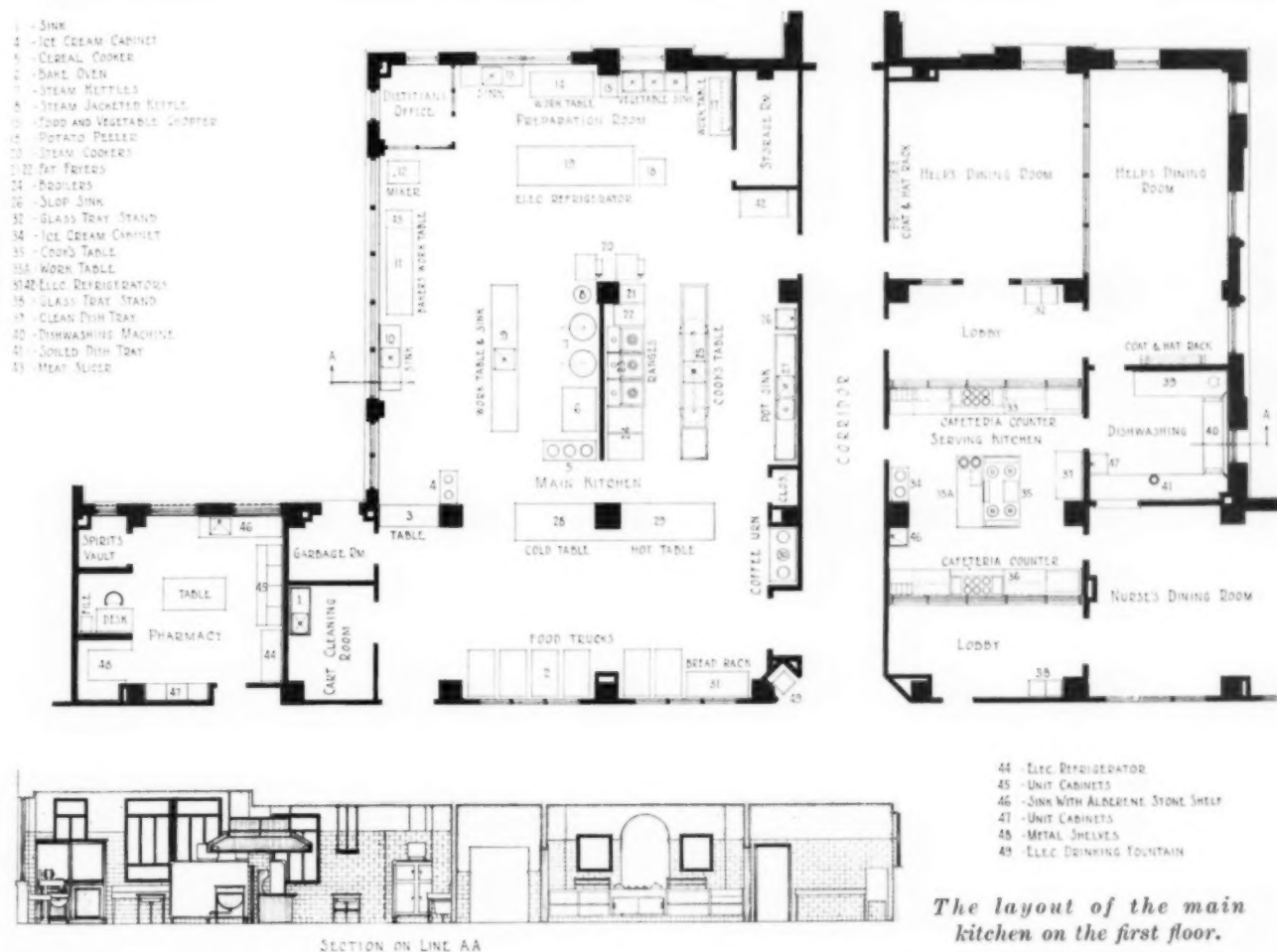
not shown in the present plan but associated with the county home. These structures include separate buildings for male and female inmates, a nurses' building with accommodations for eighty-six nurses, workshops of various kinds, a central storehouse, a laundry, and dormitories for non-nursing personnel. The only inmates of the infirmary proper, other than patients, will be the resident medical staff.

Patients, referred to the infirmary from community sources, and visitors will enter the hospital through a lobby in the central wing where the

come from the central storerooms of the county home. Dining rooms for the infirmary personnel surround a serving room directly opposite the central kitchen on the ground floor.

The infirmary has its own autopsy room and small mortuary chapel, and ground floor rooms will be equipped for the storage of patients' clothing and for the sterilization of clothing and mattresses.

The isolation ward which occupies a section of the ground floor contains six rooms, each with individual toilet and bedpan accommodations.



SECTION ON LINE A-A

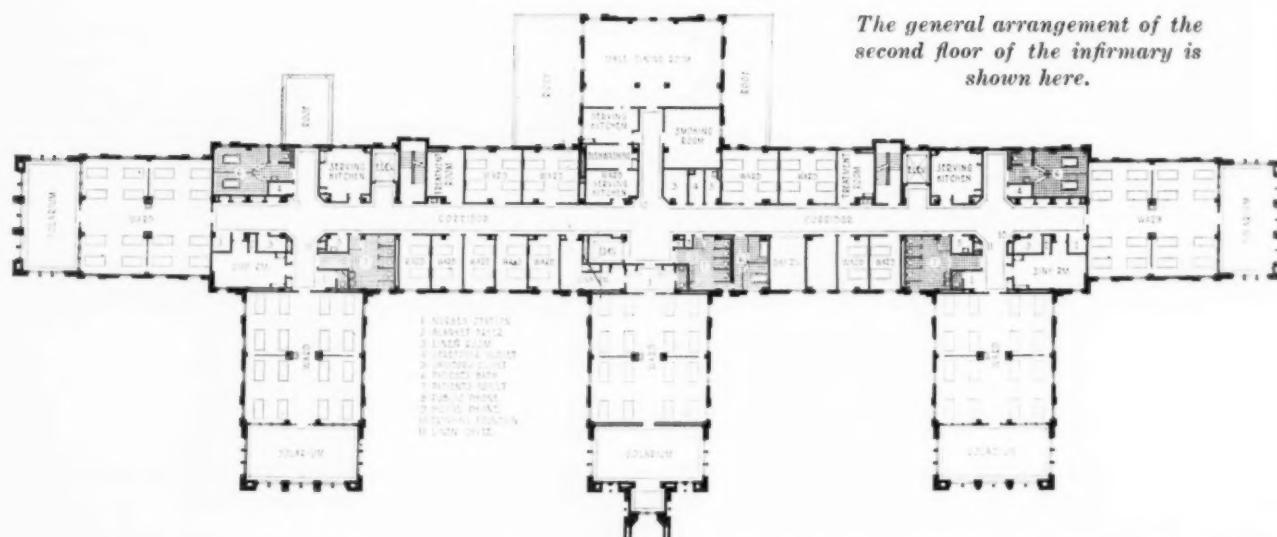
The layout of the main kitchen on the first floor.

administrative offices and the social service department are located. Immediately adjoining these offices are waiting and examination rooms which will be used not only for the examination of applicants for admission but as a consultation center for such ambulatory cases as may be sent to the infirmary for advice from the adjacent county home with which the infirmary is associated. Patients transferred to the infirmary from the county home can conveniently enter the building through the rear connecting corridor. For ambulance patients a rear entrance has been provided with an emergency room adjoining.

Supplies for the centrally located kitchen will

Four of these rooms are large enough to accommodate two patients in each. The examining and admitting room for the isolation ward can be entered either from the central corridor or from an outside terrace. Not only the admitting room but the nurses' office, the serving kitchen and the utility room have independent outside entrances. Nurses on duty in the isolation ward will enter and leave through a suite containing a dressing and undressing room, a shower and a toilet. An emergency treatment room is part of this ward.

The east and southeast wings of the first floor, corresponding to ward extensions on the floors above, have been assigned to the resident medical



*The general arrangement of the second floor of the infirmary is shown here.*

staff. The interns have a private corridor, a commodious living room, a modest porch, seven individual bedrooms and congregate toilets and baths. Quite separate from the interns' quarters are four suites of rooms suitable for married medical officers; each suite has a bedroom, a living room and a bath; two of the four have kitchenettes.

The drug room is centrally located on the main corridor directly opposite the admitting and examining rooms.

The second floor plan is typical. It has a normal capacity of 112 beds divided as follows: 5 sixteen-bed wards, 80 beds; 4 four-bed wards, 16 beds; 8 two-bed wards, 16 beds—total, 112 beds. With four additional beds in each solarium, the total capacity of a typical floor would be increased to 132 beds; if six beds were placed in each solarium, the total for the floor would be 142 beds. All but sixteen beds have south, east or west exposure. In a hospital of this type a considerable number of patients are out of bed during the day and it is proposed to place in the four-bed wards, whose outlook is north, ambulatory patients who will spend the day in the solariums, on the roof, on the

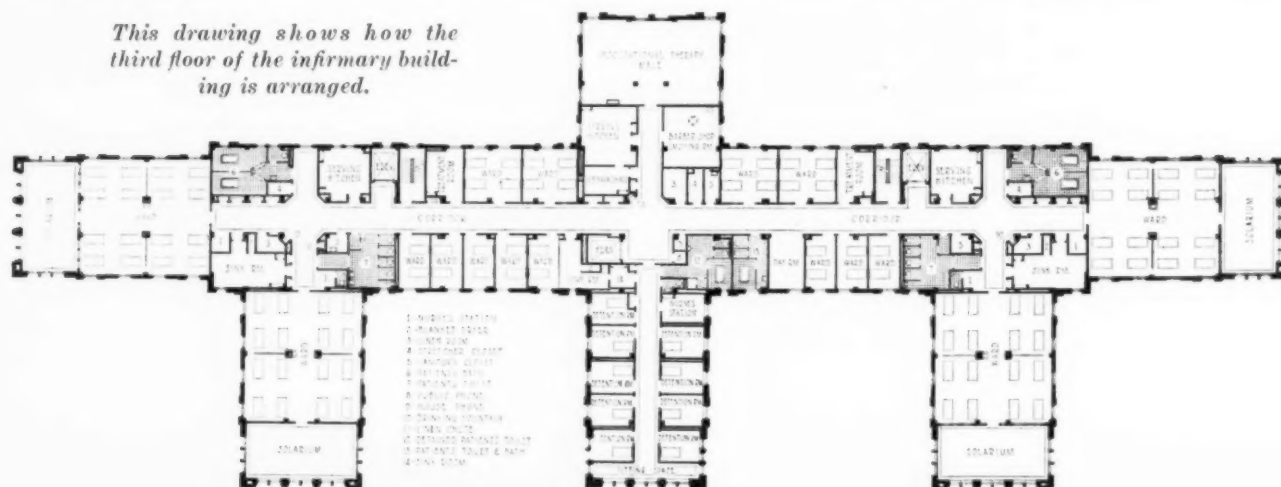
grounds or in the occupational therapy classroom.

The typical sixteen-bed ward is divided into four bays of four beds each. There is a wash-basin in the center of each ward. The width of the ward is such as to permit nurses to circulate around the beds freely, working from any side. A single utility room centrally placed serves two sixteen-bed wards. Baths and toilets are unusually spacious to facilitate the free movement of wheel chairs. Each typical floor is provided with two rooms for examination and treatment.

For the accommodation of the normally fairly large proportion of ambulatory patients two central dining rooms have been provided, one for male patients, the other for female; the male dining room is on the second floor, the female dining room on the fourth floor. Adjoining the male dining room is a fairly spacious smoking room. Each of the patients' dining rooms has an independent serving kitchen, but a dishwashing room is centrally placed for both dining room and ward service.

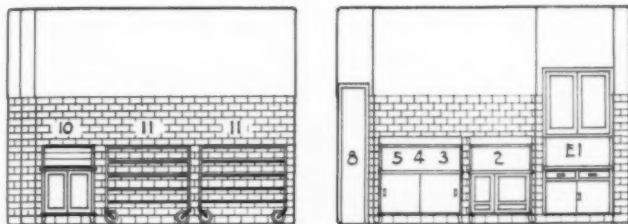
The long central corridor is directly ventilated by two openings at the rear and through an open-

*This drawing shows how the third floor of the infirmary building is arranged.*



ing formed by a day room alcove in front. These openings will provide light as well as air for the central corridor, which will also obtain a considerable amount of borrowed light from the two four-bed wards on either side. On account of the length of the corridor and the unusually large amount of wheel chair traffic, its width has been increased from the normal hospital width of eight feet to ten feet. Handrails are installed as a help to enfeebled patients. The corridors have a protective wainscot of glazed terra cotta tile.

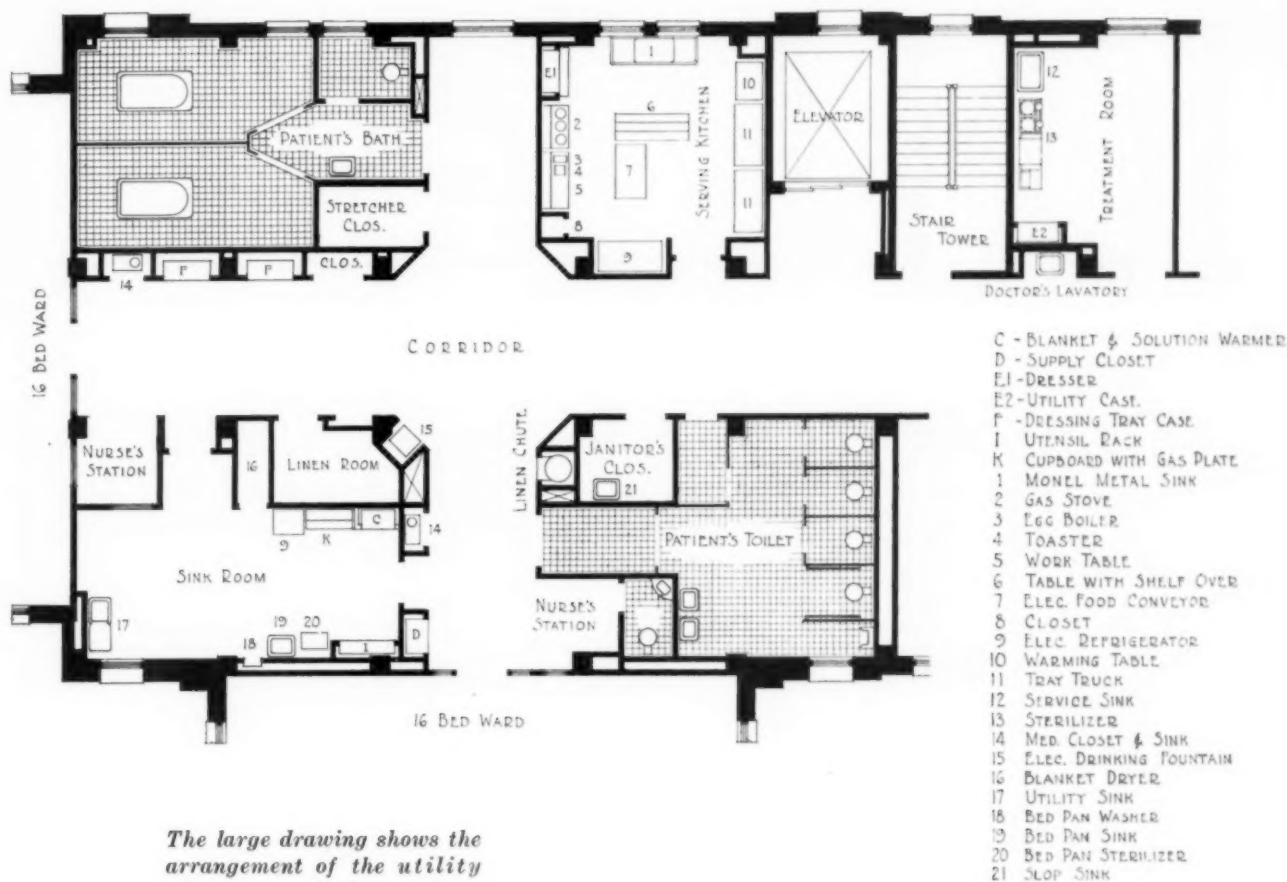
The two-bed wards which extend along the southerly side of the corridors are for patients whose presence in the larger wards is undesirable.



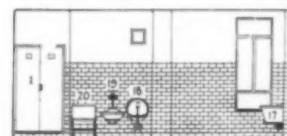
The third floor contains two atypical features. The central northerly extension (over the kitchen and dining rooms) is reserved for occupational therapy for male patients; adjoining the occupational therapy room is a barber shop and smoking room. The south central wing contains a detention ward for mental cases. In this section patients have single rooms with protected doors and windows and with special arrangements for ventilation. A similar detention ward is provided on the floor above for female patients.

The central section of the fifth floor remains unfinished for the time being, but at the two extremities of the main stem small wards have been provided for a small number of maternity cases (often court cases assigned to the county for care) and for children. The limited accommodations provided for these departments are based upon the experience of the infirmary, but each of these wards is so arranged that it can be extended.

The plan of the kitchen is so clearly shown in the accompanying plan that an extended verbal



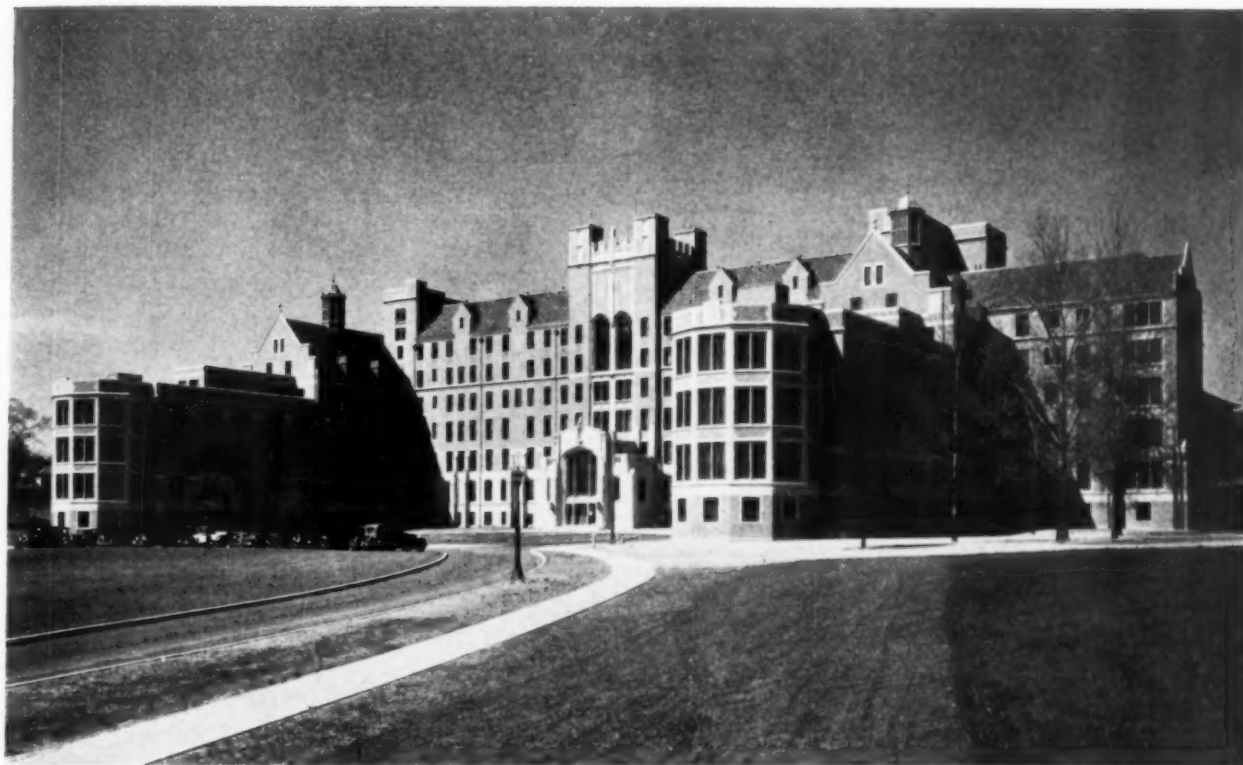
The large drawing shows the arrangement of the utility group for a typical nursing unit. The code identifies the various units. The drawing at the right illustrates the arrangement of the sink room and the small drawing above shows the serving kitchen.











## New Units Double Springfield Hospital's Bed Capacity

By EUGENE WALKER, M.D.

Superintendent, Springfield Hospital, Springfield, Mass.

THE citizens of Springfield, Mass., approached the subject of enlarging the Springfield Hospital by appointing a committee in 1927 to study the city and the surrounding country with a view to deciding how large the institution should be.

The committee employed a consultant and then, acting upon his report, made recommendations not only for the Springfield Hospital but for all the hospitals in the vicinity. When plans for the new Springfield Hospital were completed a professional campaign to raise \$2,500,000 was conducted in May, 1929. The sum of \$2,300,000 was pledged and building operations were started in November, 1930.

The hospital is about one and a half miles from the center of the city. It is on a car line, but it is not near the main through highways. Therefore most of the accident cases in and around Springfield are handled by the other hospitals. Since it is about 200 yards from the street the hospital is quiet, and the approximate thirty-three acres of

ground make a lovely setting for a beautiful building. The buildings are in what is commonly called Collegiate Gothic architecture with two wings projecting out in front, and a kitchen and dining room building immediately back of the main entrance. The entire structure is fireproofed. The exterior walls are of red brick with cast stone trimming. The sloping roofs are of grey-green tile. The nurses' home and the dormitories for the male and female help are separate buildings behind the hospital, and the service and laundry building is on the right. A vaulted beam ceiling, marble floors and paneled walls lend an old English atmosphere to the entrance lobby and waiting room.

The business and administrative offices and the library are to the right of the front lobby. The record room, the consulting rooms and the staff and board rooms are to the left of the entrance. The staff and board rooms have, like the entrance lobby, paneled walls and antique plaster ceilings. They are separated by a partition that can be

folded out of sight behind a panel door, thus providing one large room for meetings.

Both ends of the first floor and the entire second, third, fourth and fifth floors are for patients. One wing is for private patients, the middle section is for semiprivate patients and the other wing is for ward patients.

The hospital was decorated on the recommendation of an interior decorator who worked out a pleasing color scheme of green, brown and cream. The patients' rooms are tinted in pastel shades.

The record room is large and well lighted and is directly opposite the staff room, thus making it convenient for the record librarian to see the doctors and easy for the doctors to consult the records.

The out-patient department is on the ground floor in the west wing. The emergency ward is at the extreme west end of the ground floor of the main building. The center section of the ground floor contains additional out-patient departments, the bronchoscopic department, the telephone switchboard, the physiotherapy department, the linen storeroom and the x-ray and cystoscopic de-

partments. The autopsy room, the undertakers' room and the chapel are at the east end of the main building. The ground floor of the east wing houses the main laboratory which consists of a chemistry room, a urinalysis room, a pathologic room, a serologic room, a media preparation room and a museum, as well as two electrocardiographic rooms and two basal metabolism rooms. In addition to this, each floor is provided with a small laboratory where simple tests may be made.

The private rooms range in type from small rooms sharing a toilet with another room to large rooms with private toilet and bath. A part of the semiprivate section and all of the wards are cubicles with metal partitions that are seven feet high and slightly longer than the beds. The largest wards contain eight beds and are divided into four-bed units by a subutility room which contains facilities for ordinary nursing care, such as a hot plate, a bedpan washer and a hopper sink.

The Springfield Hospital staff is to be commended for insisting that the hospital be constructed of these eight-bed units, which make it possible for a nurse always to be in attendance on



*The hostess's desk in the main lobby. Visitors are received here and inquiries regarding patients answered.*

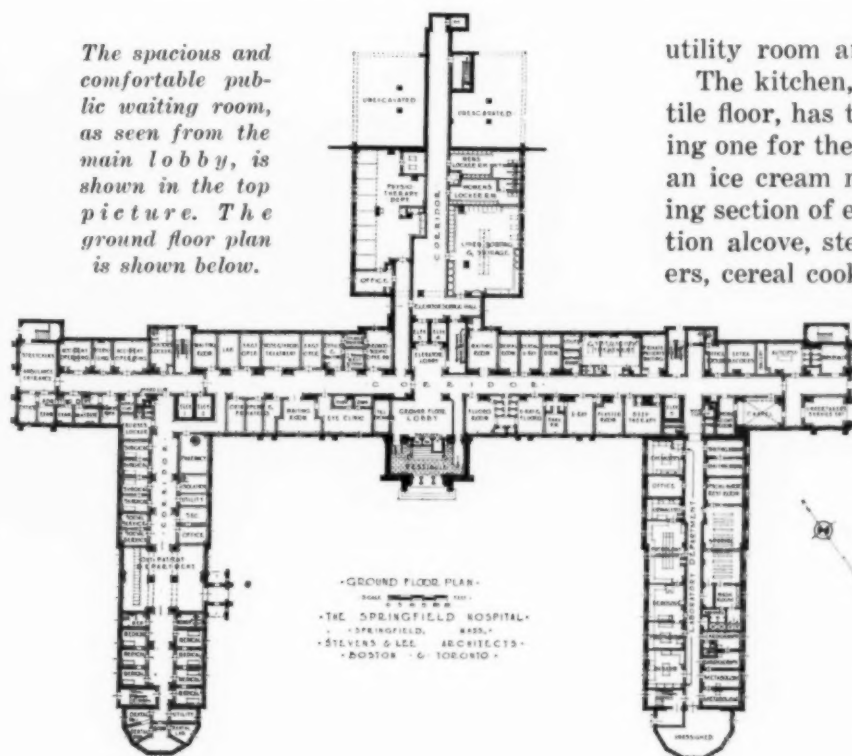
the patients in the units. The cubicles in the semiprivate section are wider than those on the ward section. There are a certain number of two-bed rooms that can be used as single rooms. These are on the second and fourth floors. The fourth floor, with the exception of the east wing, was planned particularly for children, and the cubicle partitions are partly of glass. Playrooms with built-in blackboards and games inlaid in the linoleum floor are in the center section of the fourth floor, and there is a solarium with ultraviolet ray transmitting glass windows and doors over the west wing.

There are eight operating rooms on the sixth floor. Each combination of two operating rooms shares a sterilizing room and scrub-up alcove. The anesthesia rooms on this floor can also be used as recovery rooms, if necessary. Other units on the sixth floor include a central sterilizing and dressing manufacturing room, locker and rest rooms for the nurses, the staff and the interns, instrument and utility rooms and a large studio and dark room for the photographic department.

The east end of the fourth floor has been laid out as an operating room for the eye, ear, nose and throat service. It consists of four operating rooms, three anesthesia rooms, a scrub-up room, a



*The spacious and comfortable public waiting room, as seen from the main lobby, is shown in the top picture. The ground floor plan is shown below.*

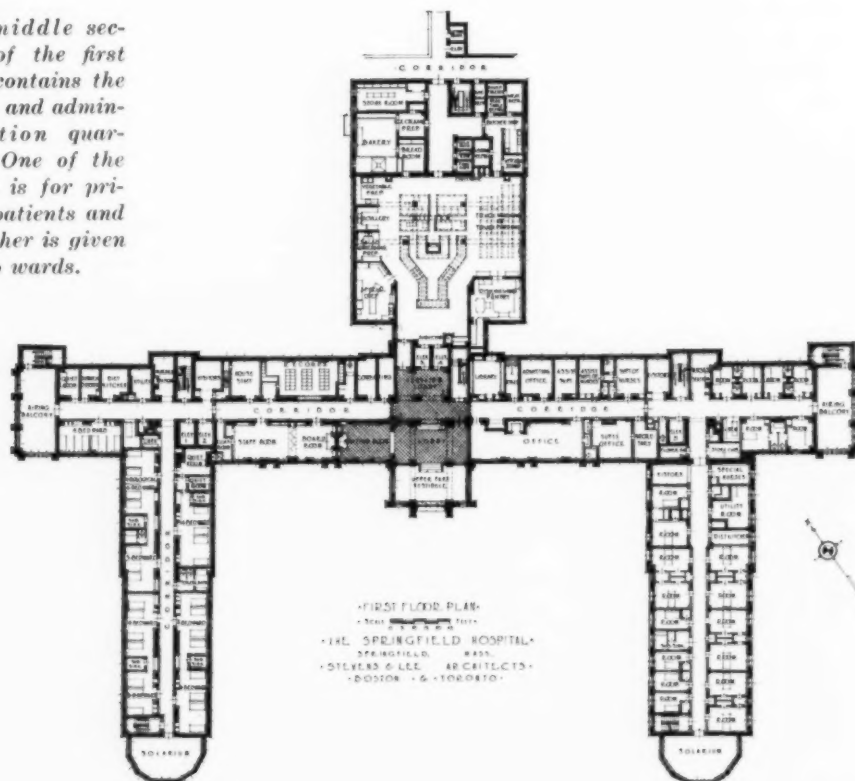


utility room and a locker room for the doctors.

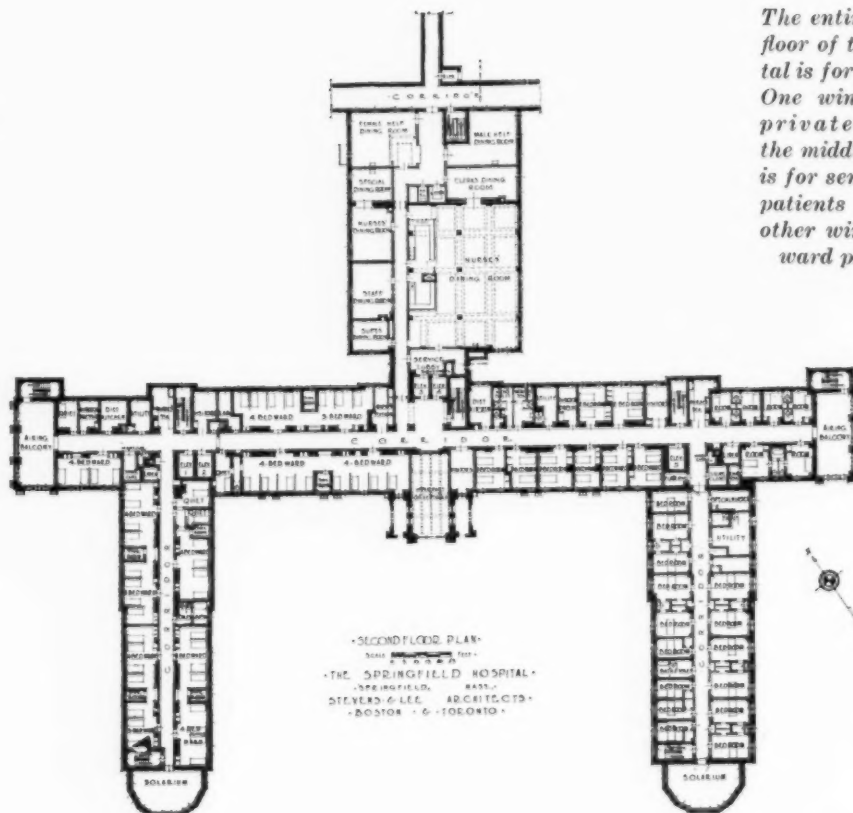
The kitchen, with glazed tile walls and quarry tile floor, has the necessary refrigerators, including one for the garbage, a storeroom, a bake shop, an ice cream manufacturing room, a main cooking section of electric ranges, a vegetable preparation alcove, steam stock kettles, vegetable steamers, cereal cookers, a scullery, a dessert alcove, a special diet kitchen, a space for the food trucks and a dishwashing room. Most of the kitchen equipment was fabricated from nonrusting steel. The trays are set up in the main kitchen. Cold food is placed on the trays and hot food is placed in a separate heated section on the food truck before being dispatched to the floor. When the truck reaches its destination liquids are added to the tray, the hot food is placed on the tray and it is carried to the



*The middle section of the first floor contains the offices and administration quarters. One of the wings is for private patients and the other is given to wards.*



*The entire second floor of the hospital is for patients. One wing is for private patients, the middle section is for semiprivate patients and the other wing is for ward patients.*



patient. All dishwashing is done in the main kitchen. The dining rooms are immediately above the kitchen, making the connecting link of the second floor of the new hospital building with the ground floor of the old building. Both the main dining room and the help's dining room have cafeteria service.

There is a central linen room in the laundry. The soiled linen is sent down chutes in laundry bags. The bags are collected and taken through a tunnel to the laundry where their contents are washed, finished and sorted according to requisitions for the various units. All torn linens are segregated and mended in the laundry. Therefore,

from two streets and is cross connected in the buildings in such a manner as to ensure a continuous supply from one street source in the event that the service from the other is interrupted.

The hospital is equipped with a CO<sub>2</sub> brine machine which, in addition to refrigerating the ice boxes in the various diet kitchens, the flower rooms and the main kitchen, provides iced drinking water at essential points.

Zone heating has been provided for the hospital buildings and its regulation is based on the temperature at various places both outside and inside the buildings.

An emergency lighting system has been pro-



*A view of the main kitchen, showing the cooks' tables and the cooking equipment, which is operated by electricity.*

the laundry personnel is responsible for the collection, the washing, the finishing, the mending and the delivery of all linen.

The addition to the nurses' home provided eighty-eight more rooms, increasing the capacity to a total of 200 beds. All these rooms are equipped with clothes closets, running water and telephone communication with the front office in the nurses' home. The telephones, however, are not connected with the dial system of the hospital proper. The basement of the nurses' building is equipped with classrooms for the various activities of the training school, and a utility room and a ward unit.

The water service is brought into the building

vided on a storage battery. If the current is cut off from the hospital the emergency lighting system starts automatically. This lights the operating rooms and the exit and night lights in the corridors and in the patients' rooms.

The elevators are of the latest automatic selective control type. They can be operated with or without attendants.

Linoleum is used on all of the floors except the basement, which has asphalt tile, and the operating rooms, kitchens and utility rooms which have terrazzo flooring.

The building is equipped with casement windows and roll screens. Venetian blinds are used

to shade the patients' rooms. Sound deadening material is used in the corridors, the quiet rooms, the utility rooms and the kitchens.

A complete distilling plant, on the top floor of the central tower, provides distilled water which is piped through sterile piping to various outlets throughout the building, at which points reheaters are located from which either hot or cold distilled water may be drawn. Distilled water is also brought to a redistiller in the laboratory to provide triple distilled water for this department.

Electric time clocks have been placed in strategic places throughout the hospital, with the master clock in the business office. A dial telephone system is used for intercommunication. The paging

register the letter F on the paging annunciators throughout the building and also register on a main annunciator in the telephone switchboard room, indicating the station from which the call originated.

The doctors' in and out system has four annunciators. A doctor may register "in" on three of them. The fourth annunciator is in the telephone switchboard room.

New beds, bedside tables, over-bed tables and floor lamps were bought for all the rooms in the new hospital, thus ensuring comfort for the patients. The bedside tables are on swivel casters, and the tops are covered with rubber. The support for the basin rings farthest from the bed are



*The laundry is responsible for the collection, the washing, the finishing, the mending and the delivery of all linen.*

system is controlled from the telephone switchboard room, from which point the various numbers assigned to the staff are registered on flashing annunciators in the corridors of the staff rooms.

The nurses' call system is of the visual type with a locking button at each patient's bed which, when operated, registers the call in lamps at the bed, over the door to the room or ward in which the call originates and in the annunciators in the utility rooms and nurses' stations on the same floor. The annunciators have an audible system, the use of which is optional.

The fire alarm system has break-glass stations at various strategic points which, when operated,

used to hold a test tube in which is placed the patient's thermometer. The bedside tables also have a compartment for the bedpan and urinal.

The over-bed table is adjustable as to height and the center section can be elevated. The top of this table is covered with rubber. The lamp is an ordinary gooseneck floor lamp with an exceptionally long and strong gooseneck section. There are no set screws to be loosened or tightened. This makes it easy for a patient to adjust the light.

The bed has one feature that is unusual, but not original with us, that is, a device for adjusting the height of the bed in order that a convalescent patient may easily get in and out of bed.





## Nurses Should Be Happy in This Well Planned Home

By EDWARD RANDALL, M.D.

President, Board of Managers, and

LUCIUS R. WILSON, M.D.

Superintendent, John Sealy Hospital, Galveston, Tex.

THE Rebecca Sealy Nurses' Residence is the third building to be completed in the building program of the Sealy and Smith Foundation for the John Sealy Hospital, Galveston, Tex. The first building was the power plant and laundry, completed in 1929. This was followed by the out-patient building, completed in 1931.

The architectural service of R. L. White, supervising architect for the University of Texas, was supplied to the hospital by the board of regents of the university because of the hospital's connection with the University of Texas school of medicine and the John Sealy college of nursing. Dr. C. G. Parnall, superintendent, Rochester General Hospital, Rochester, N. Y., was engaged by the Sealy and Smith Foundation as medical consultant.

The new residence is a complete unit for the

John Sealy college of nursing of the University of Texas and provides educational, social and living accommodations. It cost \$350,000 and was furnished from a \$25,000 appropriation from the board of regents of the university and a \$15,000 appropriation from the Sealy and Smith Foundation for the John Sealy Hospital. The land on which the building was erected cost \$50,000, making a total expenditure for the completed building of \$440,000.

After much study a site was selected on a block of ground directly across the street from the space reserved for a new hospital. This location while a block distant from the present John Sealy Hospital will be convenient when the building program is completed. Access to the present hospital can be gained during inclement weather by means

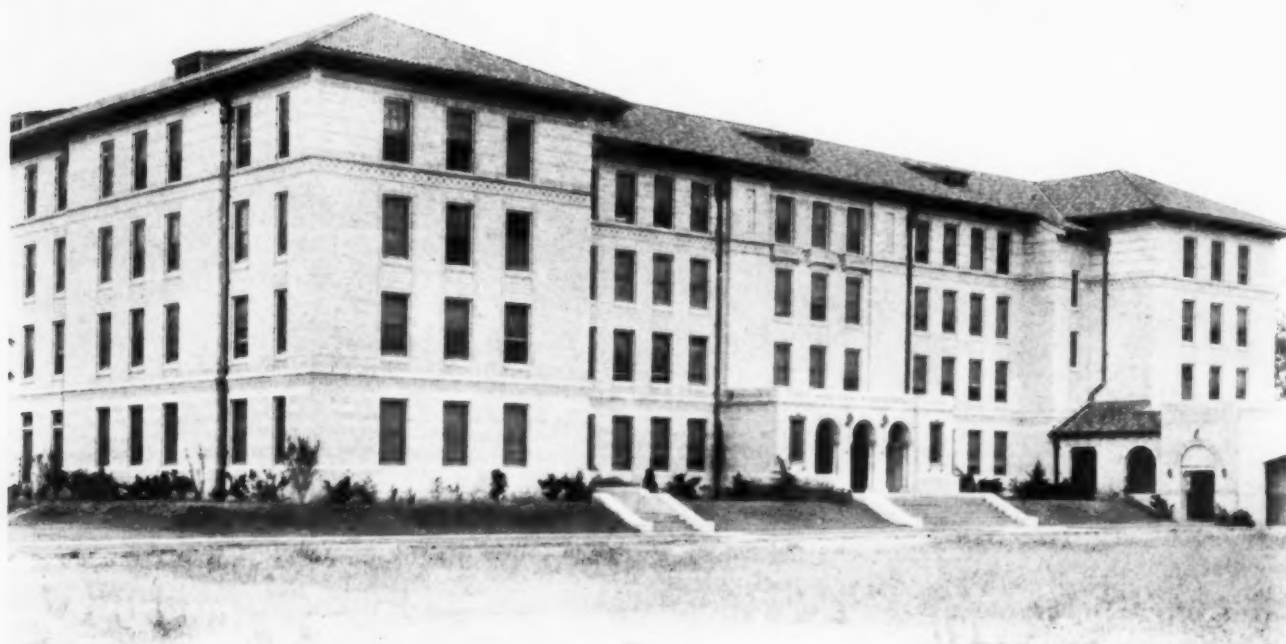
of arcades connecting the residence with the out-patient building and the out-patient building with the hospital.

The design of the building is along Spanish lines. Stone and brick in patterns are used for the first floor and brick for the upper three floors, with an ornamental tile band between the third and fourth floors and a colorful tile frieze beneath the cornice. The building has a tile roof laid on a concrete slab which is joined to the supporting columns and thereby ties together the entire framework. The roof is colorful, with red predominating, mottled with various shades of tan and brown.

The main entrance in the center of the building gives an attractive appearance to the exterior. It is composed of stone and brick with stone pre-

operator has a view of the front door at all times. The wall separating the office from the entrance hall contains 170 United States mail boxes with combination locks. These mail boxes are used for keeping room keys when the nurses leave the building, in addition to their use as mail receptacles.

The matron's suite is adjacent to the office, and a door from her living room opens into it. On the left of the hall are the men's cloakroom and toilet. Immediately back of the entrance hall is a foyer, which is the center of the social unit. This foyer and the entrance hall are separated by columns and arches. The finish of the two rooms is similar. Each has a tile floor but of different patterns, in colors of dark red mottled with brown and tan.



*The Rebecca Sealy Nurses' Residence is built along Spanish lines. The tile roof is colorful, with red predominating.*

dominating. The brick used in small patterns harmonizes with the remainder of the building. Seven granite steps rise to a broad landing of granite and hard red brick. Three stone arches rise above this landing and offer entrance to a tile floored vestibule beyond which are massive wooden doors opening into the entrance hall of the residence. Bronze lanterns and bronze grilles over the windows add ornamentation.

The first floor is divided into three parts. The central portion contains the living rooms and the wings on each side are utilized for educational units. Entrance to the central wing is through the main entrance into the entrance hall. On the right hand side of this hall is the business office in which the telephone board is so placed that the

The walls have a faience tile wainscot, 5 feet high, with a color scheme of tan and brown. The beam construction of the ceilings and the interlying panels are decorated with stencil patterns in harmonizing colors.

Directly across the foyer from the entrance is the large living room, which is separated from the foyer by iron gates and grilles. The floor of the living room is two steps lower than that of the foyer, giving it a typically Spanish effect. The ceiling, both on the massive beams and on the panels between the beams, is decorated in stencil patterns of many rich colors. The parquet floor is made of alternating oak and maple blocks laid diagonally and has an oak border of blocks and strips. The walls are finished with a faintly tex-



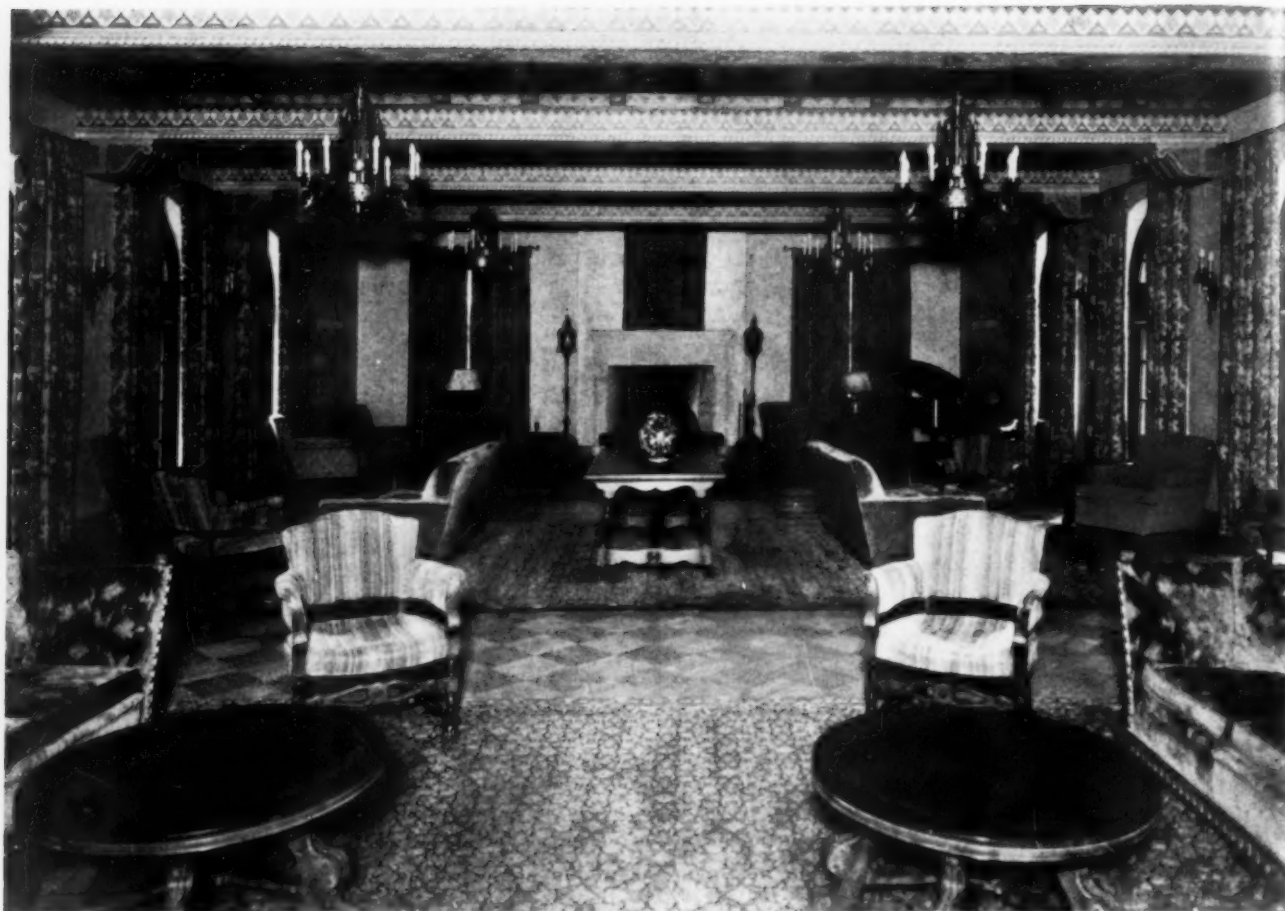
*The open air deck on the roof over the living room, above, is a favorite recreation spot for the nurses. Below is a view of one of the gardens between the wings of the building. Walks of flagstone lead from the doors to fountains and to loggias.*

tured plaster, painted a warm ivory and wiped with robin's egg blue. A large fireplace at one end of the room adds cheerfulness and comfort. It is constructed of stone with the seal of the University of Texas carved on the mantelpiece.

The furniture was especially designed and selected to fit the room. It is massive and substantial in order to stand the hard and constant usage so necessary if the full benefit of a living room is to be obtained. The frames of the furniture are constructed of machine carved solid walnut, and the upholstering material is of autumn colors with red, brown, green and tan predominating. A piano, a radio and a writing desk add to the usefulness







*The large living room, decorated in stencil patterns of many rich colors, is designed for practical use as well as beauty.*

of this room. Wall lights give a subdued lighting effect, and six bronze chandeliers add brilliance when needed.

On either side of the living room French doors open into gardens where water fountains in tile basins lend beauty to the landscaping. Walks of flagstone lead from the doors to the fountains and to loggias, which extend across the north end of the gardens from the middle wing of the building to each outside wing. These loggias have tile floors and are equipped with many large comfortable pieces of garden furniture finished in colors to harmonize with the exterior of the building. A concrete wall with iron grille work on top extends between the wings of the building across the south end of the garden.

Shrubs and bougainvillea have been planted against this wall, and when in bloom will add color and beauty to the garden. Other shrubbery has been used against the walls of the building, with a generous number of flower beds intermingled to add to the general attractiveness. The gardens are softly lighted at night by bronze lanterns hanging from the walls and can be brilliantly illuminated by flood lights on the cornice of the building when desired.

A reception room for more formal use than the living room opens off the foyer through an arched entrance. This room is finished in much the same manner as the living room but a different color scheme is used. The walls are of softly textured plaster, finished in ivory and wiped with warm tan. The draperies, rugs and upholstery harmonize, red and dark blue colors predominating. A door from this room opens into one of the gardens, and a mirror on the wall across the room from this door reflects the water fountain as though a picture had been painted on the wall.

Directly across the foyer from the reception room is the library. Walnut wainscoting and enclosed book shelves cover the walls. The ceiling here is stenciled in pastel colors, both on the beams and the panels, the pattern being more elaborate than any used elsewhere in the building. A cork floor ensures quietness. Stained glass windows containing an outline of the Nightingale lamp help to create the atmosphere of quietness and comfort necessary for the proper utilization of such a room.

The wing on the west end of the building contains a classroom, a demonstration ward, two offices and a supervised study hall. The demonstration ward contains six beds and is as com-



*Walnut wainscoting and enclosed book shelves cover the walls of the library. A cork floor ensures quietness in the room.*

pletely equipped as a hospital ward, even to having a service room, kitchen, linen room and linen closet. A dressing room is provided for the students so that they may change their clothing and act as patients. A large closet with glass doors occupies a prominent place in this ward, and in it are labeled articles of all hospital supplies so that preliminary students may acquaint themselves with these articles.

The supervised study room contains five walnut tables, each accommodating eight students. Shelving on one wall contains a reference library. The instructor, who supervises the study hall, has her office at one end of it and through a glass partition commands a full view of the students, thereby removing the necessity for her constant presence in the study hall.

The classroom contains fifty-four conventional type opera chairs with drop-leaf writing arms. The instructor stands on a raised platform behind a pulpit desk. Slate blackboards line the wall for general classroom work.

The east wing of the building contains an auditorium, an instructor's office and a dietetic laboratory. The auditorium has a seating capacity of 240. The chairs are removable so that the room

may be used when desired for social activities. Stencil work on the ceiling and panels on the wall are finished in light green and silver. The ceiling is finished with sound absorbing material. A fire-proof motion picture machine booth is provided so that use can be made of films for class work and for entertainment when desired. The stage is provided with colored footlights so arranged that any desired color effect may be obtained. The ceiling has a battery of flood lights. On either side of the stage is a small dressing room. The auditorium will be used for a large lecture room and for any school function requiring the assembly of the entire school.

The dietetic laboratory has provisions for a class of twenty-four students. Each student has a locker and drawer for her supplies and shares the large table top with three other students. The hospital's dietitians give the course in dietetics, and ample provision has been made for demonstrations. All table tops and sinks are covered with noncorrosive metal.

The upper three floors contain the bedrooms for 163 nurses. The directress has a three-room suite. The assistant directress has a room and bath. Four instructors occupy two suites, each consist-

ing of a living room, a bedroom and a bath. There are twenty-two double rooms and 110 single rooms. Each single room contains a lavatory and a clothes closet, and each double room contains one lavatory and two clothes closets. The lavatory is placed in an alcove partitioned off so that it is not visible from the room. A small hall separates it from the clothes closet. When the entrance door to the room is opened, it covers the entrance to the alcove so that on entering the room the lavatory is hidden from view. The lavatory is a standard recess type with splash back on three sides. A medicine cabinet hangs above the sink and contains two side bracket lights and an electric receptacle.

#### *Roof Deck Is Pleasant Spot*

All bedrooms are furnished alike. The furniture consists of a bed, a dresser, a study table and chair, a study lamp, a waste basket and a large comfortable chair. With the exception of the large chair, metal furniture is used. A colored bedspread and dresser scarf to match are supplied to each student.

Each floor has a small living room where nurses can gather in lounging attire for informal parties instead of congregating in a bedroom. Opening off the living room is a small completely equipped kitchen. Each floor also contains two trunk storage rooms and a laundry with a two-compartment sink, a wall mounted ironing board and clothes horses. All trunks are stored to avoid crowding the bedrooms. A tiled recess at each end of the corridor contains a drinking fountain.

The central wing of the building which contains the living room is only one story high. Its roof is surrounded with a parapet wall and is used as an open deck. Rustic furniture has been provided. Spot lights from the cornice of the building flood the deck and gardens with light. Electric receptacles in the parapet wall provide convenient outlets for other purposes. This spot affords the nurses much pleasure on warm summer evenings.

The fourth floor contains a six-bed infirmary, fully equipped to provide hospital care for students who are not critically ill and for those with acute respiratory infections who should be separated from the student body. Four beds are in a small ward and two beds are in single rooms. The bath and utility rooms are combined, and the kitchen, which is complete, also contains a supply closet.

The telephone board has two trunk lines for outside communications and two tie lines connecting it with the hospital board, thereby permitting direct communication between the hospital and the residence. An operator is on duty from 7 a.m. un-

til 11 p.m. When the operator is off duty, the directress's telephone and the operating room supervisor's telephone are connected to the hospital through the tie lines so that emergency communications may be transmitted. Telephones are conveniently arranged at either end of the corridors for general use. A buzzer type intercommunicating system is installed in each room. When the operator receives a call for a nurse, she buzzes the nurse's room. If the nurse is in, she answers by the same means and goes to the nearest telephone. If the operator receives no response, she reports that the nurse is out. A code has been devised for different purposes, enabling the operator to notify nurses of callers, telephone calls, special delivery letters and packages left at the front desk.

In planning the bathrooms and toilet facilities the ratio of one fixture for five persons was established. The baths and toilets are in separate rooms. Each bathroom contains two showers and two tubs. The walls are finished with ivory colored tile and black trim. Marble partitions separate the baths. Each shower bath has a small dressing cubicle with a built-in seat. The toilet rooms are finished with the same materials. Each one contains five wall hung toilets. These rooms, although airy, are equipped with forced ventilators. Toilet and bathing facilities are placed at each end of the corridor on each of the three bedroom floors.

#### *Maintenance Cost Is Low*

In construction the building is of the latest fire resistive type. The frame and floor construction are of reinforced concrete, resting on creosoted pine piles thirty-five feet long. Interior partitions are of hollow clay tile, which is also used to line the exterior walls and to provide forms for the concrete joist construction.

Terrazzo flooring is used throughout the building with the exception of the entrance foyer, the social rooms on the first floor and the corridors. The first floor corridor floors are of rubber tile inlaid in a terrazzo border. The corridors of the three upper floors are of mastic tile inlaid in terrazzo. The ceilings of all the rooms on the first floor and of all corridors are covered with sound absorbing material. The water lines are brass with bronze fittings. The wood trim is quartered red gum and birch finished in walnut. The general decorative treatment of the plastered surfaces is a light buff with an egg shell finish. All toilets and bathrooms have tile floors and wainscoting, with marble partitions. Plumbing fixtures are wall mounted. The window sills are marble. All other materials in the building were chosen with the aim of creating a substantial building with low maintenance cost.



# Eye Service at Its Finest Features This Century Old Hospital

By STEPHEN WIERZBICKI

Superintendent, Wills Hospital, Philadelphia

THE Wills Hospital, Philadelphia, one of the oldest institutions in the world devoted to ophthalmology, celebrated the one hundredth anniversary of its birth when its new home at Sixteenth and Spring Garden Streets was opened on November 12, 1932.

The hospital was founded in the year 1832 by a bequest of James Wills, Jr., a philanthropic Quaker merchant, who left a sum of approximately \$119,000 to the city of Philadelphia in trust for the establishment of an institution designated in his will as "The Wills Hospital for the relief of the indigent blind and lame." The corner stone of the

hospital was laid on April 2, 1832, on a plot of ground opposite what is now Logan Square, and two years later on March 3, 1834, the building was opened for treatment of patients. Because in the years that followed only an occasional patient who came under the designation of "lame" requested treatment at the hospital, its work became entirely devoted to the treatment of eye conditions.

From a modest beginning of fifty patients, cared for in the first year, the Wills Hospital has grown steadily until in 1932, 2,789 house cases were admitted for either medical or surgical treatment. The first record of clinic patients goes back to the



*The exterior of the new Wills Hospital, a six-story structure, is red colonial brick with limestone columns and trim.*

year 1846 when ninety-two patients were treated. Since then the number has been increasing until last year 23,203 patients were treated in the outpatient department.

Although additions were made from time to time to the original building, it was realized for many years that they were entirely inadequate to meet the steadily increasing demands.

The board of directors of city trusts, who govern the hospital, consummated the sale of the original site to Cyrus H. K. Curtis, publisher, and the property at the northwest corner of Sixteenth and Spring Garden Streets, half of a city block, was purchased for the erection of a new hospital.

The new Wills Hospital, with a bed capacity of 200 patients, is splendidly located for hospital purposes. It is situated centrally with excellent communication facilities with all parts of the city. The hospital is a six-story structure with a basement and a roof apartment. The exterior of the building, of early nineteenth century Georgian design, is red colonial brick with limestone columns and trim on a base of Deer Island granite. The first two stories cover a square of 154 feet in front to 157 feet in depth. The four upper stories are U shaped with the open end facing north thus providing a large

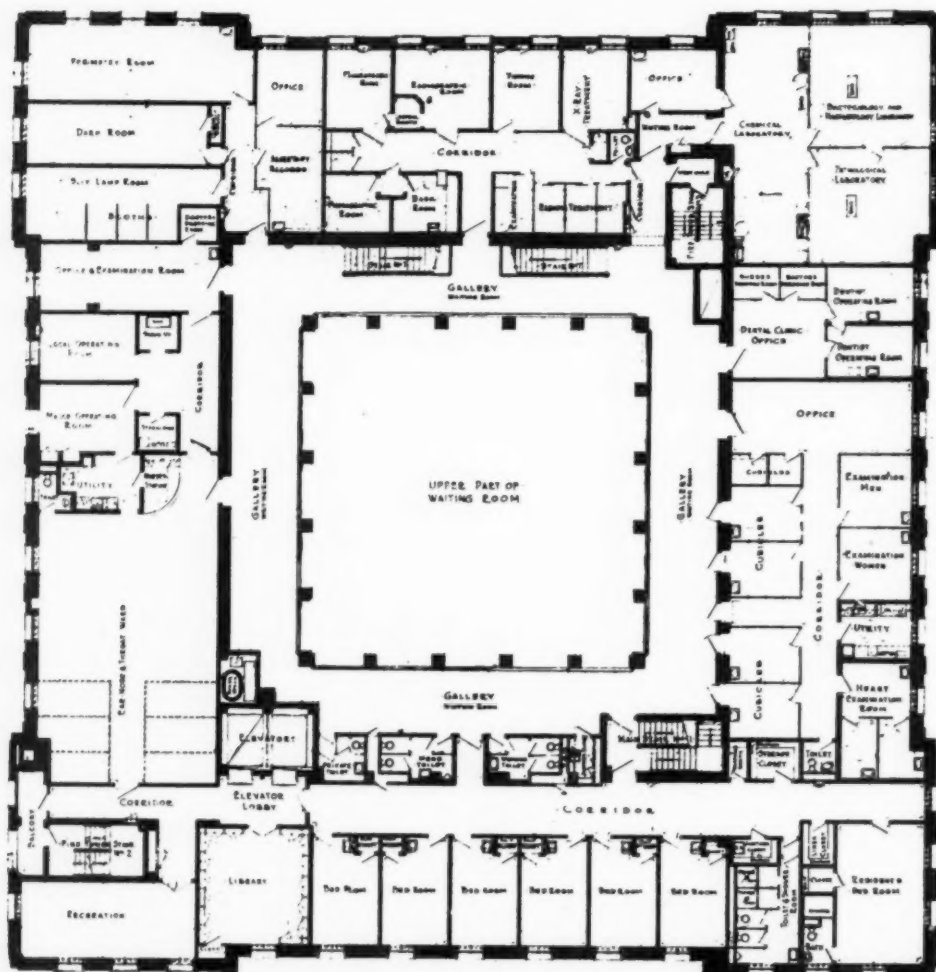
roof court between the wings so that all activities have good natural ventilation and light. A large skylight on the roof court provides ample light for the main waiting room on the ground floor.

On the ground floor are the administrative offices, three eye clinics, a refraction department, the social service department and a small operating suite for emergencies and work originating in clinics that does not require the use of the regular operating suite. All of these departments are grouped around a large waiting room which gives the place the appearance of a spacious lobby. Each eye clinic occupies 75 by 30 feet. This space is divided into a clinic room proper, 50 by 30 feet, a dark room, 15 by 30 feet, on one end and an examining room, 10 by 30 feet, on the other end for special studies with a slit lamp, refraction, perimetry and student instruction.

A particular feature of this floor is the refraction department which complies with the most advanced thought on this subject. The refraction is done in six booths, 24 feet long by 5 feet wide, divided by steel partitions. The refractionist is provided with a distant control electrically operated test cabinet with eight vision charts, an electric ophthalmoscope, a retinoscope, and a curtain

arrangement for the darkening of each booth, so that retinoscopy can be practiced without leaving the compartment.

Some years ago it was realized that the work of an eye institution was rather incomplete unless associated departments were at the command of the ophthalmologist to which patients could be referred for other studies. Therefore within the last seven years the following clinics were established: ear, nose and throat, dental, skin, medical, neurologic, x-ray



*The mezzanine floor contains clinics for ear, nose and throat, dental, skin, medical, neurologic, x-ray and radium, a laboratory and a physiologic optics department.*



*The main kitchen, which is in the basement, has good ventilation and light from deep wide airways on the side.*

and radium. These departments, with a laboratory and physiologic optics department, were placed on the mezzanine floor, reached from the main waiting room by a wide stairway. This clinic coordination has given patients the most adequate eye service obtainable, and it is believed that the Wills Hospital is the pioneer in this development.

The third and fourth floors are given over to free wards. On the third floor all inflammatory eye conditions are treated. The fourth floor is devoted to cataract and glaucoma patients. On each of these two floors are two large wards of twenty-six beds each. Adjacent to the large ward is a soundproofed three-bed ward, a patients' locker room and toilet facilities. Every ward has been constructed with the idea of making it self-sufficient. Consequently each is provided with a doctors' examining and dark room, a nurses' station and a utility room. On each ward floor are two recreation rooms, one for male and one for female patients. On the third floor are also the children's ward and the isolation ward. In each of these wards the beds are placed in cubicles of steel and glass. Adjacent to the children's ward is a playroom with colorful murals from fairy tales.

The ward arrangement of the fourth floor is the same as that of the third, except that the space

occupied by the children's and isolation wards on the third floor is utilized for the operating suite, the sterilizing and dressing preparation room and storerooms for operating room supplies. The operating room suite consists of an operating room devoted to unclean cases and a large operating room divided by a steel partition into two sections for intra-ocular operations. A scrub-up room separates the two operating room units. All operating rooms are equipped with electrically heated and thermostatically controlled cabinets in which solutions and blankets may be kept at desired temperatures. All operating rooms are air conditioned.

The fifth floor, which is soundproofed throughout, was designed for private and semiprivate patients. Establishment of this floor was a departure from the policy of the hospital of treating charity cases only and was brought about by requests from patients who could afford to pay and who desired treatment at the hospital and by the demand of the medical staff for accommodations for the care of their private patients.

This floor is a complete unit containing an operating suite, examining rooms and a kitchen. Accommodations are provided for thirty-eight patients. All rooms have complete lavatories, and a number have baths.



The sixth floor is equipped as a nurses' home providing accommodations for thirty nurses. All rooms have running water, the chief nurse and supervisors have bathrooms connected with their quarters. Two large bathrooms with tubs and showers are provided for the other nurses. Recreation rooms, a kitchenette, a laundry and a sewing room surround the nurses with a homelike atmosphere. Above the nurses' home is a roof apartment for the superintendent of the institution.

The basement contains the kitchen and four dining rooms. Here also are the laundry, the linen room, the pharmacy, storerooms, the mechanical and electrical plant and rest rooms for the help.

Service between the floors is supplied by two

exception of a few done in cement in the basement, are all terrazzo with linoleum runners where such were considered necessary.

All plumbing fixtures are either vitreous china or noncorrosive metal. Bathtubs are of the built-in type equipped with shower heads. Washbasins and toilets are all supported from the wall to permit easy cleaning underneath. An interesting feature of the plumbing fixtures is that all water faucets have raised letters to enable persons with defective vision to distinguish between hot and cold water.

Water is supplied from the city mains at a pressure of 40 pounds. In the basement are two automatically controlled electrically driven pumps with a capacity of 150 gallons per minute each. The



*The beds in the children's ward are placed in cubicles of steel and glass. There is a playroom adjacent.*

high speed self-leveling elevators and by three stairways, two of which are fire towers.

For handling supplies a hydraulic plunger lift travels from the street level to the basement.

Drug supplies from the pharmacy are sent to the distributing counter on the first floor by a small electric dumb-waiter.

The building was constructed with a view to the lowest possible maintenance cost, especially insofar as future painting is concerned. Consequently, with the exception of the nurses' floor, the walls of corridors and stairways have all been faced either with glazed brick or brick tile and in all the wards a glazed brick dado goes up five feet from the terrazzo base of the floor. The floors, with the

water from the city mains is discharged into two 3,000-gallon pressure tanks in which the pressure is increased from 40 to 85 pounds. The water for house use is supplied direct from these tanks. A motor driven air compressor maintains the necessary pressure.

The water system for the building's fire protection equipment consists of four risers and four built-in hose cabinets on each floor. In addition there are three 4-inch standpipes, one on each fire stairway and one on the main stairway. Standpipes equipped with 2½-inch fire department hose connections are interconnected with the fire department plugs in the street, thus the fire department can pump from the outside of the build-

ing direct to the inside. In addition, portable fire extinguishers are placed at strategic points on each floor.

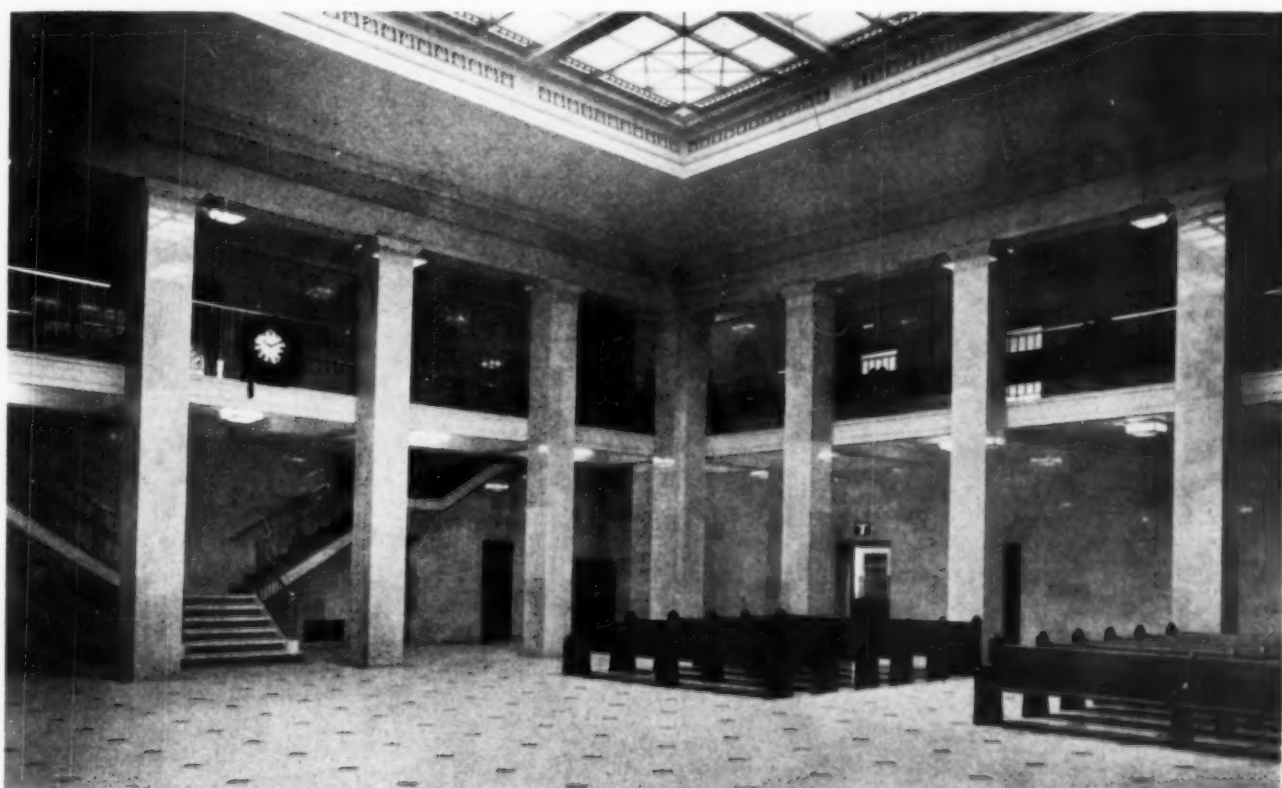
Two hot water heaters, one for the general house supply and one for kitchen and laundry use are in the basement. Each generator has a capacity of 950 gallons and a heating capacity of 1,250 gallons a minute. The heating is accomplished by steam at 5 pounds pressure. The water temperature for house use is automatically maintained by thermostatic control at 140°, water for laundry and kitchen is controlled in the same manner and maintained at 180° temperature.

Steam used at the hospital is supplied by a local utility company which eliminates the necessity of

uum system and return line and a duplex vacuum pump unit, one pump operating at a time. High and low pressure steam drips and returns are discharged into an economizer heater for the purpose of preheating the make-up water before it enters the hot water heaters.

All radiators and heating units are automatically controlled. Living quarters contain thermostats which provide means of regulating room temperatures. All radiators throughout the building are recessed in the walls and are provided with bronze grille fronts flush with the wall surface.

The hospital is ventilated by a concealed air supply and an exhaust fan duct system. The filtered air enters the building and is exhausted through



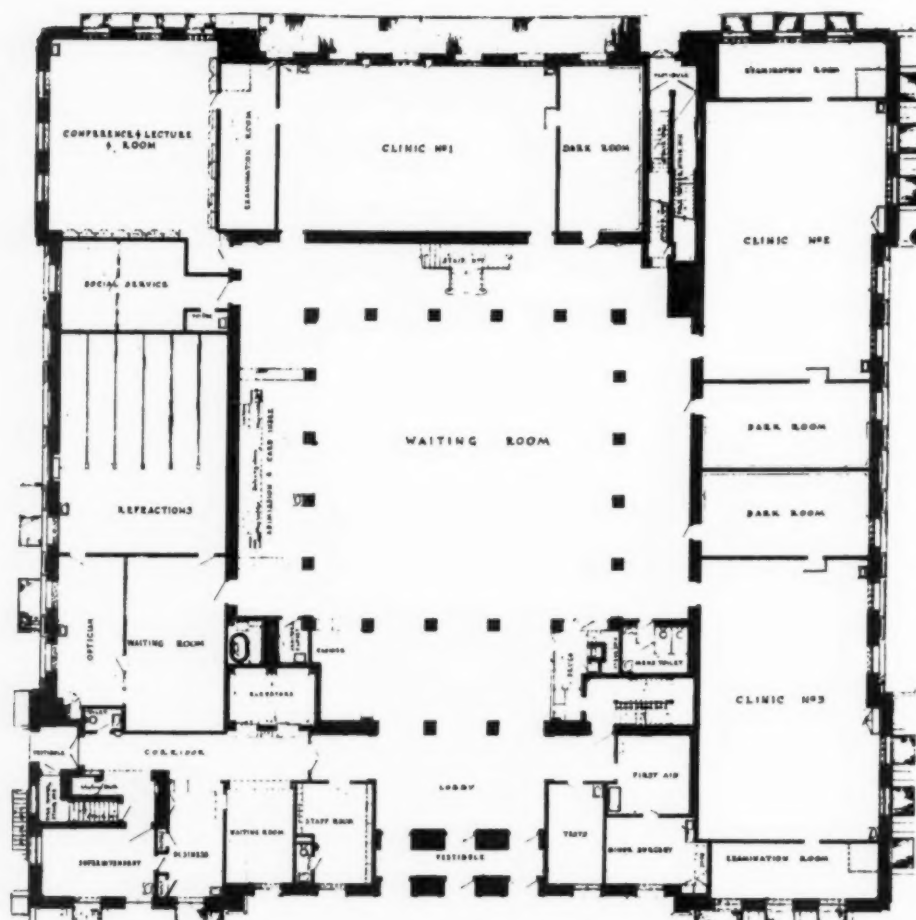
*A wide stairway connects the spacious main waiting room with the clinics on the mezzanine floor.*

maintaining a boiler plant. The steam enters the building through a 5-inch main valve in the basement; from this main valve it runs through two branch lines. One branch is a 4-inch line for winter steam service, the other a 2½-inch line for summer service. The initial pressure of each line is metered at 145 pounds and is then reduced to necessary pressures. These reduced steam lines lead from the meter room to the distributing room where they terminate. From this point separate steam lines run through the building for the heating system, the hot water heaters, the laundry service, the sterilizers, the main kitchen and the diet kitchen service.

The heating is accomplished by a two-pipe vac-

grilles installed flush with wall surfaces. For purposes of economy in operation the ventilating system is arranged in a number of units, separate units serving particular parts of the building.

Electricity is supplied the hospital from two substations of a local utility company. Two primary electric services of 2,300 volts, two-phase alternating current, enter the transformer vaults and meter room. Each service is connected to a two-panel board. The switches have an interlocking device so that in case of failure of service in either bank of transformers, switches are automatically thrown from one service to the other. Each service has capacity to carry both power and light lines. In the case of failure of both electrical



*The ground floor includes the administrative offices, three eye clinics, a refraction department, a social service department and a small operating suite.*

under a ventilating hood lined with noncorrosive metal.

The remainder of the equipment, such as counters, sinks, warming cabinets, is made up of heavy gauge noncorrosive steel. Ample provision has been made for the storage of food in vegetable, dairy, meat and chef's boxes. The temperature of these refrigerators ranging from 36° to 45° is maintained by two thermostatically controlled refrigeration units. In the

services there is an emergency battery lighting system which cuts in automatically throughout the building until the trouble is corrected.

A nurses' call system is in use on the private patients' floor and in other parts of the building. A physicians' in and out register is included in the building's equipment.

A complete radio receiving system is in operation. Programs are distributed throughout the wards and recreation rooms by means of built-in loudspeakers and on the private patient floor by means of radio pillows. There is also an electrically operated phonograph which can be used over the radio system.

In addition to the telephone system there is an automatic intercommunicating telephone system for house use.

The building is equipped throughout with an electric clock system controlled from the basement by a master automatic resetting device.

The main kitchen is in the basement and has good ventilation and light from deep wide airways on the side. The equipment of this kitchen consists of a three-section heavy duty hotel range, a gas broiler, a steamer, a bake oven, a frying kettle, a stock kettle, a steam jacketed roaster and a cereal cooker. All this equipment is arranged

main kitchen is a glazed brick and glass enclosed office for the dietitian. Transfer of food from the main kitchen to the various floors is accomplished by electrically heated food trucks. There is a diet kitchen on the two ward floors and a fully equipped kitchen on the private patients' floor.

Ground for the new hospital was broken on October 1, 1931. The building was completed on November 1, 1932 and was placed in commission on November 12, 1932. The cost of the ground amounted to \$300,000; of the building and equipment, \$1,300,000.

Founded a century ago the Wills Hospital has not only witnessed the birth of ophthalmology but also has seen it emerge from a branch of general surgery into the highly developed and specialized science of today. During its century of charitable endeavor its physicians have never received monetary reward for their services. The Wills Hospital during that time has achieved a proud place in ophthalmology not only in the United States but in the world, and its influence has been marked in the development and advance of this branch of medicine. With the new building and modern facilities at the disposal of its staff, it enters the second century of its existence with a feeling of confidence in the future.



# How a Hospital Made Old Buildings Into a Modern Institution

By N. J. BLACKWOOD, M.D.

Rear Admiral, M.C., U. S. Navy, Retired, and Medical Director, Provident Hospital, Chicago, and

CARL A. ERIKSON

Schmidt, Garden and Erikson, Architects, Chicago

PROVIDENT Hospital and Training School, Chicago, was founded in the early 'nineties to care for the sick colored people and to provide a training school for colored physicians and nurses. Since that time the colored population of Chicago has increased greatly and the facilities of the hospital became inadequate. A few years ago an affiliation was proposed with the University of Chicago, and shortly thereafter a successful campaign was put on to provide the necessary funds to increase the capacity and facilities of the hospital. The affiliation with the university will be consummated when the new building is ready for occupancy.

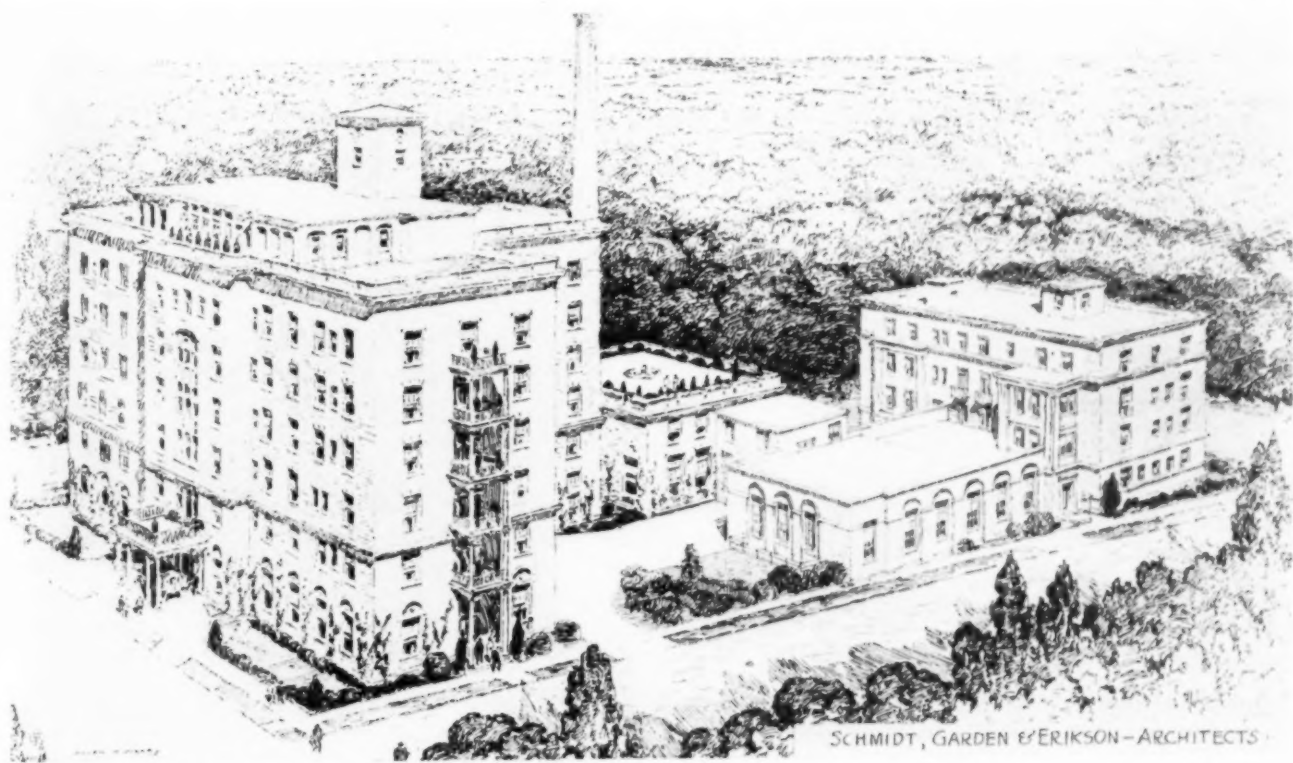
An option was secured on the properties of the Chicago Lying-in Hospital, which at that time was building a new hospital on the University of Chi-

cago campus. As soon as the Chicago Lying-in Hospital moved into its new quarters, Provident Hospital took over the old Lying-in buildings and commenced to remodel them. The buildings will be ready for occupancy by Provident Hospital next month.

There are three buildings in the group, the main hospital building, the power house and laundry building and the isolation or Mothers' Aid Building erected between 1914 and 1918. All three buildings are of fire resisting construction, with excellent hospital finish throughout.

The conversion of this maternity hospital into a general hospital, such as Provident, was a relatively simple matter; surprisingly few changes were necessary except in the isolation building.

The power house and laundry building required



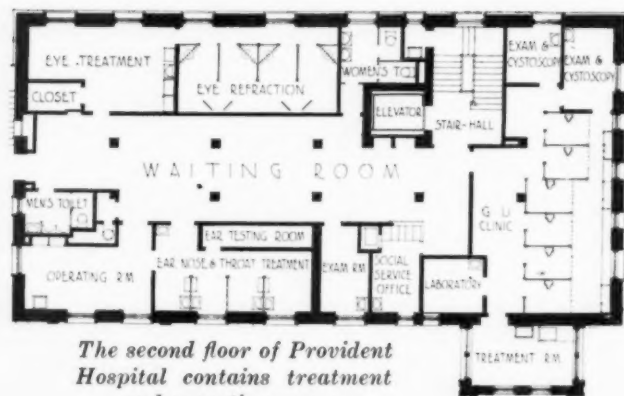
*This sketch shows how the Provident Hospital and Training School will appear when the remodeling is completed.*



*The basement of Provident contains locker rooms and storage space.*

the fewest changes. In order to increase the efficiency of the plant, the two small hand fired boilers have been removed and a new stoker fired boiler with overhead coal bunkers installed. Water softeners have been added to the equipment, which already included electric generators and ice machines, as well as the usual paraphernalia of a complete power house. The washers and tumbler in the laundry have been replaced with new and more modern equipment.

Since Provident Hospital is to be used by the University of Chicago for teaching colored physicians, the necessary increase in laboratories and similar facilities occasioned the greater part of the changes necessary in the main building. Two wings of the second floor have been converted into a medical service department, containing the x-ray, the laboratory, the metabolism, the physiotherapy and



*The second floor of Provident Hospital contains treatment and operating rooms.*

the cardiology departments. This space was formerly used for patients' rooms. The necessary changes were made with a minimum of partition alterations as it is expected that eventually this space will again be used for patients when new and larger quarters are provided for these several departments on the third and fourth floors of the laundry building. All of the plumbing and electrical connections and fixtures on the second floor are exposed and all the fixtures are arranged so that they can be moved into the new quarters when desired. The teaching program requires a large autopsy room and a dissecting room large enough for two cadavers. Several small storerooms and the employees' locker rooms in the basement of the main building have been converted for this.



*The out-patient waiting room, offices and dispensary are on the first floor.*

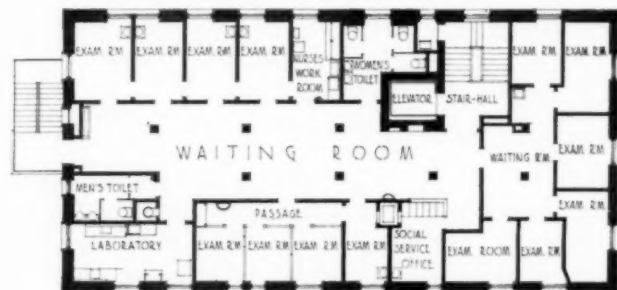
Few changes were necessary in the quarters for patients on the third, fourth and fifth floors of the main hospital building. Two of the nurseries and the adjoining workroom have been converted into seven-bed wards; several of the private rooms have been changed into two-bed rooms, and a laboratory for students and interns has been added on each floor. Two wings of the sixth floor of the T-shaped main structure were formerly used for two groups of delivery and labor rooms, and the third wing

was for housing the interns. Two of these wings remain practically unchanged, and the third has been converted, with few alterations, into four operating rooms. The existing delivery and labor rooms, formerly used for private patients, will remain as they were and will be used by the birth department.

The first floor remains practically unchanged.

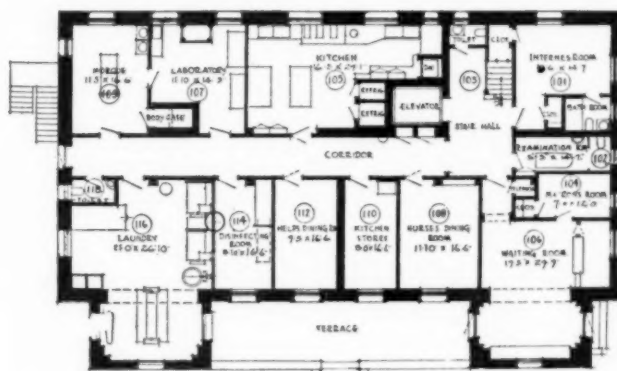


Above is the third floor layout, and below the fourth floor arrangement.

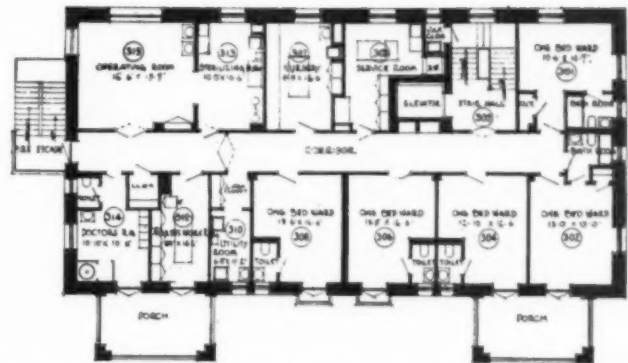


The front wing contains the administrative and admitting offices, and the rear wing houses the kitchen. Some slight changes have been made in the dining room on the second floor in order to handle the anticipated increase in medical personnel and to permit of cafeteria service.

The isolation or Mothers' Aid Building was a four-story structure that housed eighteen patients on the second and third floors, an office, a waiting room, a kitchen and a laundry on the first floor and nurses' rooms and employees' rooms on the fourth floor. There is no need for such facilities in



The first floor plan, Mothers' Aid Pavilion, Lying-in Hospital, before it was remodeled.



This shows the layout of the third floor, Mothers' Aid Pavilion, before alterations were made.

the Provident Hospital program, but there is need for an out-patient department capable of handling 100,000 visits a year in a two-hour period each day. The change of occupancy in this building required extensive alterations in the interior of the structure. It was also necessary to construct a large one-story addition to the building to serve as an auditorium and as an out-patient waiting room.

For convenience of operation under the new conditions, an underground passage has been built to connect the main hospital building, the power house and what is now known as the clinic building. A large storeroom has been constructed underneath the new out-patient waiting hall and



The fourth floor of the Mothers' Aid Pavilion prior to being remodeled by Provident Hospital.

assembly room. The receiving department is on the ground level.

The first floor of the Clinic Building houses only one clinic—that of dentistry. The balance of the first floor is for the waiting rooms, the conference rooms, the toilets, the pharmacy, the dispensing and workrooms, the doctors' coat room, the social service offices and the record room for the entire institution. The second floor houses the specialized departments, such as the ear, nose and throat department, the eye department and the G. U. clinic. The third floor of the Clinic Building contains the dermatology and syphilis department. The balance



of the space on this floor has been assigned to surgery, obstetrics and gynecology, but the layout is such that the rooms may be used interchangeably, if desired. The rooms on the fourth floor have been similarly arranged. The fifth floor is primarily assigned to general medicine and children, but the needs of the clinic operating at the moment will determine the room assignment.

Remodeling work is instructive. It is something like an autopsy—everything is laid bare. To enumerate all of the lessons learned during this examination of both the visible and invisible parts of the buildings is unfortunately not within the scope of this article. In addition to the remodeling and enlargement made necessary by the change of occu-

pancy, an extensive program of rehabilitation was undertaken and many improvements were added.

The remodeled hospital will have a capacity of 110 beds (exclusive of bassinets), and 100,000 out-patient visitors. With the interior completely redecorated, the hospital will present the appearance to the casual observer of a new building.

In attaining the final results, helpful cooperation has been secured from many persons, such as Denison B. Hull, chairman of the building committee, A. L. Jackson, president of the board of trustees and Dr. Franklin C. McLean, University of Chicago. Michael M. Davis and the officials of the Public Health Institute, Chicago, assisted greatly in the planning of the new out-patient department.

## What Constitutes Good Medical Care?

"Good medical care" is defined in the twenty-second report of the Committee on the Costs of Medical Care. The report was prepared by Dr. Roger I. Lee and Lewis Webster Jones, Ph.D., and was recently published by the University of Chicago under the title, "The Fundamentals of Good Medical Care."

The coordination of all types of medical care and the application of modern, scientific medicine to the needs of all the people are fundamental in the provision of good medical care, the authors of the report state.

The "articles of faith," upon which the concept of good medical care as used in the report is based, are listed by the authors under the following headings:

1. Good medical care is limited to the practice of rational medicine based on medical science.

There is no place in modern medicine for the quack, the cultist, or the magician; any system of prevention, diagnosis, or therapy which is not founded on rational observation and deduction has a "hit or miss" character incompatible with good medical practice.

2. Good medical care emphasizes the importance of preventive measures.

Preventive medicine is by no means confined to public health activities. The idea of prevention must pervade and inspire all branches of medicine. Prevention, diagnosis and treatment are inseparable aspects of the science and art of medicine.

3. Good medical care requires intelligent cooperation between the lay public and the practitioners of scientific medicine.

The cooperation of the patient is fully as important as the efficiency of the practitioner and the availability of his services. Often the best of doctors can do little for a patient who does not follow instructions.

4. Good medical care treats the individual as a whole.

All the factors which concern his health—mental and emotional and well as physiological—must be weighed in diagnosis, prevention and treatment.

5. Good medical care maintains a close and continuing relation between physician and patient.

Because of the complex nature of a human being and the intricate relationship between body and mind, and be-

tween the parts and the whole, a long familiarity with the patient's personality and habits is a first essential of good medical care. No amount of technical skill, no combination of mechanical and laboratory devices, is as useful in the diagnosis of many conditions as a personal knowledge of the patient's history, family situation and general mental and physical idiosyncracies.

6. Good medical care is coordinated with social welfare work.

The value of medical care among the poorer economic classes is vitiated if the patient is sent back after a course of treatment into the same surroundings which gave rise to his ailment. While medicine cannot cure unemployment or abolish slums, much can be done by cooperation with the social agencies to improve the level of health among the poorer members of society.

7. Good medical care coordinates all types of medical services.

Good medical care requires that a proper balance and coordination exist among all the various agencies and different types of institutions and organizations through which medical services are provided.

8. Good medical care implies the application of all the necessary services of modern, scientific medicine to the needs of all the people.

Medicine does not adequately fulfill its functions until the same perfection of technique is within the reach of all individuals.

## Charitable Hospitals Exempt From Electricity Tax

By a recent decision of the Commissioner of Internal Revenue, as explained in a bulletin, hospitals that are not organized or operated by profit will not be subject to the 3 per cent electric energy tax that is required by the Revenue Act of 1932, Section 616. According to this act, utility corporations are required to collect the tax from the consumer, and if such taxes have been collected from nonprofit hospitals since June 21, these hospitals should make an application for a refund.

Further information on this subject of tax exemption may be obtained from the local United States collectors of internal revenue.

# Children's Needs Are Fully Met in This New Sanatorium

By KIRKPATRICK & CANNON

Architects, Niagara Falls, N. Y., and

CHRISTOPHER G. PARNALL, M.D.

Hospital Consultant, Rochester, N. Y.

THE demand for suitable accommodations for the treatment of tuberculous children led the board of the Niagara Sanatorium, Lockport, N. Y., in 1929 to request from the board of supervisors an appropriation sufficient to erect and equip a building especially designed for children.

We were commissioned to conduct a preliminary survey and propose plans in collaboration with Scopes and Feustman as consulting architects. Beds for at least sixty children were estimated to be necessary to meet the needs of the population of Niagara County. An appropriation of \$200,000 was requested and obtained. A desirable site on high ground, sufficiently removed from the group of buildings for adult cases was made available.

The board of managers wanted a thoroughly modern, efficient unit, but was determined that there should be no waste of public funds in build-

ing the structure. The board wanted its money's worth and was willing to pay for advice on how to get it. Those associated with the planning were given to understand that no necessary item was to be omitted from the plans, but that no unnecessary or unjustifiable item was to be included. Economy of upkeep and operation and low first cost of construction and equipment were considered important factors. Despite the economic stringency which followed soon after the project was started, not a single criticism of extravagance or inadequacy has been directed at the sanatorium's board in connection with the new building.

The building is designed as a complete unit for children, and includes facilities for handling ambulatory, semiambulatory and open infirmary cases. The commonly used system of having porches in connection with poorly lighted rooms



*The Shaw Building, the new quarters for children at Niagara Sanatorium, was built at a cost of \$200,000.*



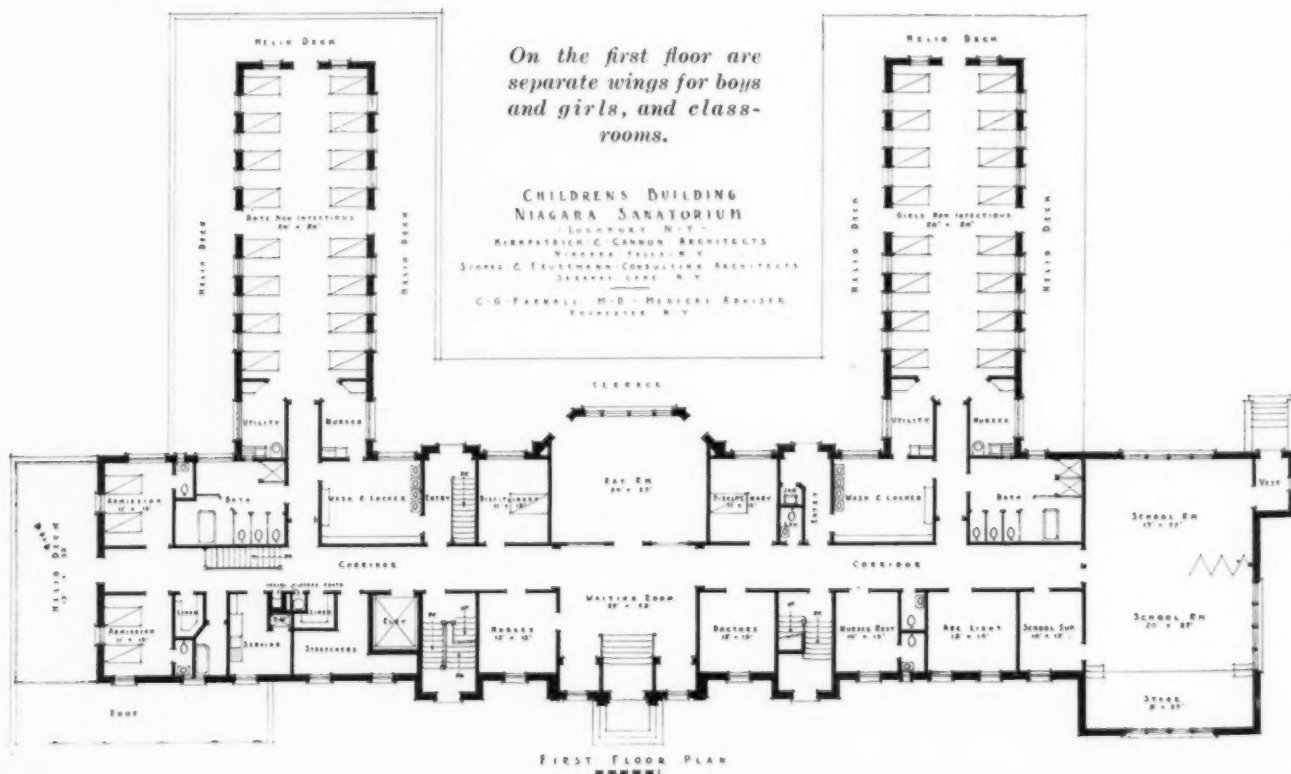
*The glazed brick walls in the wards help to reduce maintenance costs.*

and wards was replaced by one of light, relatively shallow spaces opening on to a series of open decks. The beds on each of the three floors occupied by patients may be conveniently wheeled into the open air. Segregation is made possible by the arrangement of the decks. The architectural design has been made to fit the utilitarian purpose rather than *vice versa*.

It was found that eighty beds, instead of sixty as at first planned, could be provided with the funds

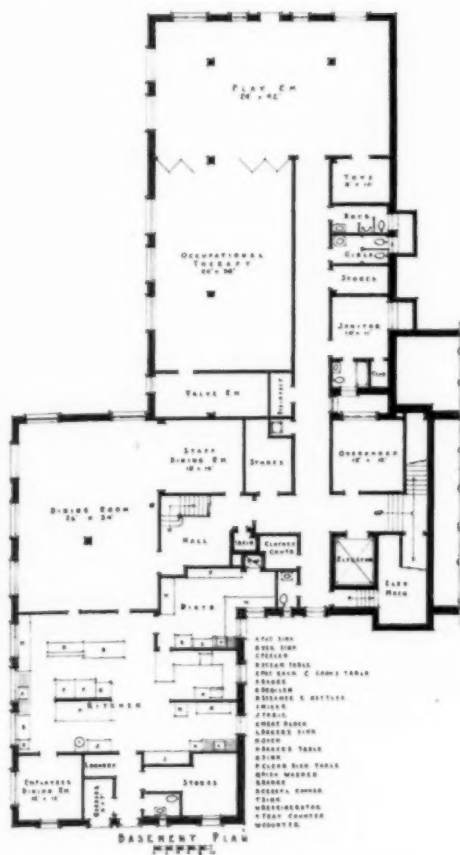
Provision is made for two school classrooms for ambulatory patients. These rooms may be turned into a single lecture room with a small stage, to be used for entertainment.

The main entrance leads into a small, well furnished lobby that opens directly into a comfortable lounge where parents can meet their children. On the first floor are the preventorium wards of sixteen beds each for boys and girls, the admitting rooms for preliminary segregation of cases and





The kitchens and dining rooms are features of the basement plan, at the left. The arrangement of the third floor, the infirmary floor, is shown below.



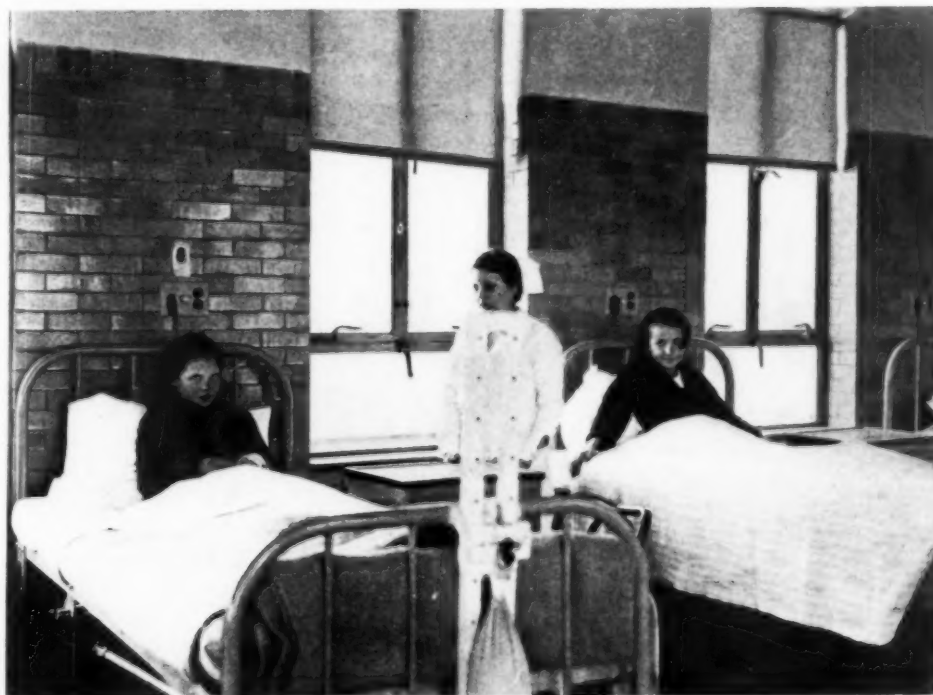
two isolation rooms. The utility rooms are connected with the large wards by doors that are wide enough to permit the passage of a bed, so that patients may be wheeled into the utility rooms for treatment or examination. The wards open directly on terraces that run the length of the wings.

The second floor is of smaller capacity than the

first due to the setback of both the main stem and wings, which provides the open decks. This floor is for the treatment of bone and gland cases.

The third floor is the infirmary for seriously ill patients. It has the usual equipment of an acute hospital.

The walls in the service portions, in the large wards and in the corridors are of glazed brick of a soft tan gray color, extending to the door height. The brick walls, using a single layer of double faced brick, cost practically the same as the usual plaster finish, and while perhaps not so attractive as tile they are more durable and much less expensive. The only upkeep they require is an occasional washing, which is an important matter when ambulatory children are concerned. Altogether, the building gives the impression, borne out by its use, that it is not only modern but that it will stay modern.



This is a typical girls' ward. Note the electric outlet over each bed.

# The Periodic Payment Plan for the Purchase of Hospital Care

*Recommendations of the council on community relations and administrative practice of the American Hospital Association in relation to group hospitalization plans for people with limited incomes<sup>1</sup>*

**B**ELIEVING that group hospitalization offers a practicable method for the distribution of unforeseen hospital costs which are often burdensome and embarrassing to persons whose incomes are limited, the trustees of the American Hospital Association requested the association's council on community relations and administrative practice to study the subject and to formulate recommendations on the subject for the guidance of hospitals and for the information and protection of the public. In compliance with this request the council has prepared the following statement.

## *Object of the Periodic Payment or Group Hospitalization Plan*

There are doubtless many persons who, while not able under ordinary circumstances to pay the cost of hospital care when overtaken by sickness, could and would pay from six to twelve dollars a year if by so doing they could be assured that their hospital bills would be provided for. Group hospitalization plans, properly developed, should enable many persons, for whom hospital service must now be provided out of taxes or from private charity, to carry their own load without hardship. The principal purpose of the plan is to enable persons of limited means who value their independence and do not wish to become objects of charity or to be deprived of needed hospital care to include hospital costs in their personal or family budgets. Group hospitalization plans should be established with this public service in view and not for the gain or profit of the promoters.

Hospitals should be paid reasonable sums for services rendered to patients under group hospitalization plans; "reasonable sum" means a sum

approximately equal to current maintenance costs. While the plan will benefit hospitals by broadening the base of hospital support, profit should not be sought by hospitals participating in the system.

## *Benefit to Physicians*

The lightening of the subscriber's burden which this system provides when hospital care is needed, makes it easier for the subscriber as patient to pay his doctor's bill, and to this extent the plan benefits physicians.

## *Hospital and Medical Standards*

Group hospitalization should be so administered as to encourage high standards of medical care. The admission of a hospital to participation in the plan should indicate approval of the hospital's ethics, administrative methods and professional standards.

## *Competition to Be Avoided*

Participation by hospitals in group hospitalization should be cooperative rather than competitive. Group hospitalization or periodic payment plans should as far as possible include all hospitals of standing in the community.

## *Periodic Payment for Hospital Care a Long Recognized Need*

For several years, even before the depression, the difficulty experienced by many patients in paying for hospital service and the difficulties of hospitals in collecting patients' fees suggested the need of a practicable method of enabling patients to budget their hospital bills. The present widespread interest in group hospitalization is, therefore, not accidental or of recent or merely temporary interest; on the contrary, it reflects a fundamental social need which has been recognized for a long time.

Group hospitalization plans have been instituted or are in contemplation in a number of cities, among them Dallas, Fort Worth, San Antonio,

<sup>1</sup>The members of the council are: S. S. Goldwater, M.D., New York City, chairman; B. W. Black, M.D., Alameda County Hospital, Oakland, Calif.; A. K. Haywood, M.D., Vancouver General Hospital, Vancouver, B. C.; Joseph C. Doane, M.D., Jewish Hospital, Philadelphia; Ada Belle McCleery, Evanston Hospital, Evanston, Ill.; Frederic A. Washburn, M.D., Massachusetts General Hospital, Boston; G. Harvey Agnew, M.D., Department of Hospital Service, Canadian Medical Association, Toronto, Ont.; Basil C. Mac Lean, M.D., Touro Infirmary, New Orleans; Winford H. Smith, M.D., Johns Hopkins Hospital, Baltimore; R. C. Buerki, M.D., Wisconsin General Hospital, Madison, Wis.; Mary L. Hicks, John N. Norton Memorial Hospital, Louisville, Ky.; C. W. Munger, M.D., Grasslands Hospital, Valhalla, N. Y.; Michael M. Davis, Ph.D., Julius Rosenwald Fund, Chicago; Rev. Maurice F. Griffin, St. Philomena's Church, Cleveland; W. S. Rankin, M.D., Duke Endowment, Charlotte, N. C.

Houston, Shreveport, Louisville, New Orleans, Colorado Springs, Pueblo, Newark and Elizabeth, N. J., Chicago, New York City, Philadelphia, Brattleboro, Vt., St. Paul, Grinnell, Ia., and Rockford, Ill. The places mentioned are those in which noncommercialized plans have been or are being developed and do not include those in which plans have been initiated as profit-making enterprises by business promoters or "hospitalization corporations."

#### *Essentials of a Periodic Payment Plan*

The plan which the American Hospital Association's trustees and council have endorsed in prin-

ment at a specified annual rate, and are to be distinguished from insurance arrangements by which insurance companies collect premiums or dues, and make cash payments to policyholders to reimburse them for losses incurred through sickness.

#### *Exclusion of Professional Fees: Relation of Physician and Patient*

Group hospitalization plans as recommended by the American Hospital Association are intended to cover hospital charges only. The arrangement of professional fees between physician and patient is to be regarded as a private matter not affected by the plan; the plan involves no change in the pre-

WIDESPREAD public interest exists in periodic payment plans for the purchase of hospital care (the system frequently spoken of as group hospitalization). Response to this interest has taken two forms: first, the development of plans whose chief motive is public service; second, attempts to promote schemes into which the business or profit motive enters to a degree which the trustees and council on community relations and administrative practice of the American Hospital Association believe to be detrimental to the best interests of the public.

So many requests for advice in regard to group hospitalization plans have been received by the association that the board of trustees, after voting its approval of the principle of the periodic payment plan for the purchase of hospital care, requested the council to formulate recommendations for the guidance of hospitals that wish to develop such plans. The conclusions of the council are embodied in the accompanying bulletin. The council will keep under close observation further developments in this sphere, and from time to time may issue supplementary recommendations.

The council urges hospitals to proceed with caution in the development of periodic payment plans. Local committees which take this matter under advisement are urged to familiarize themselves with the principles set forth in the accompanying report, and interested hospitals are advised to

make no commitments until they have considered the problem from the respective standpoints of public service, administrative practice, medical standards and actuarial requirements.

The council wishes especially to caution hospitals not to accept hastily the plans of promoters who approach this matter with profits chiefly in view and to enter into no contract which would deprive them of full control of promotional methods and other procedures and relationships which the plan involves.

The actual development of a plan appropriate to the requirements of a given community will necessitate the consideration of many details which it was thought best to omit from the present bulletin. In the formulation of a plan, those interested will naturally turn to similar agreements already in force in various communities. It would be wise to check such agreements against the council's recommendations and, where any doubt arises about the relative merits of divergent procedures, to communicate with the council, which to the extent of its ability is prepared to cooperate with hospitals in the formulation of programs.

Communications on this subject should be addressed to the Council of the American Hospital Association, 18 East Division Street, Chicago.

Respectfully,

Bert W. Caldwell, M.D.,  
Executive Secretary.

ciple is a periodic payment plan under which a large number of individuals contribute equal amounts to a common fund to be used for purchasing hospital service when needed. The participating hospitals, individually or as groups, guarantee to provide care, of the types specified in the agreement, for any enrolled contributor or member, and the proceeds of subscribers' payments (after the deduction of necessary and carefully controlled expenses of administration) are paid over to the participating hospital or hospitals in proportion to the service rendered.

Group hospitalization agreements provide for the rendering of certain services in return for pay-

existing normal relationship between physician and patient.

#### *Choice of Hospital by Subscriber*

A group hospitalization plan should be such as to render its benefits available in any participating hospital selected by a subscriber to which his physician has access or is acceptable.

#### *Admission and Treatment of Patients*

A patient entitled to benefits under a group hospitalization or periodic payment plan should be admitted in the usual manner on the recommendation of his own physician and should be cared for



by his physician under the regular hospital rules governing professional services. The plan should not require a hospital to change its established policies with reference to its medical staff or to kinds or medical classification of patients admitted.

#### *Regularly Employed Groups Preferable as Subscribers*

So far as possible the plan should be based upon arrangements made with associated groups of subscribers regularly employed. Physical examinations are not required where large groups are simultaneously enrolled.

In some of the more conservative plans the subscriber becomes eligible only after a definite period (one month to three months) of employment; the object of this qualification is to avoid abuse of the plan by individuals who might seek temporary employment solely for the purpose of obtaining hospital care.

#### *Enrollment of Individual Subscribers*

The enrollment of individual subscribers increases the cost of initiating and administering the plan and fails to develop a feeling of group solidarity which is a valuable aid to the continued support and proper administration of the plan. If subscribers are individually enrolled they should be accepted only upon voluntary application and as a rule should pay a higher subscription rate in fewer installments.

#### *Extension of Benefits to Dependents*

The extension of benefits to the dependents of an employed subscriber may be arranged for in one of two ways: one method is to enroll members of the subscriber's family as additional subscribers; the other is for the participating hospitals to offer a substantial discount (say  $33\frac{1}{3}$  per cent) from the regular hospital rates to any subscriber who seeks hospital care for a dependent.

#### *Waiting Period*

Benefits usually accrue only after a waiting period (one to two weeks) from the time the membership begins. When subscribers are individually enrolled, the waiting period should be somewhat lengthened.

#### *Hospital Benefits*

Insofar as possible the annual subscription should cover all hospital charges to a patient. The total number of days of hospital care which a subscriber may claim in any one year is usually limited. The grade or type of hospital accommodation which a plan provides should of course conform

to local custom and should be such as to satisfy the reasonable expectations of subscribers. All routine hospital services should be included as a minimum, and special or additional charges should be eliminated as far as practicable. Extra charges for diagnostic and "special" services discourage prospective subscribers, and fail to provide protection for the patient against important items of cost.

#### *Exclusion of Certain Diseases*

Benefits do not as a rule include hospital service of a kind not ordinarily rendered by community hospitals; thus those suffering from acute venereal diseases, pulmonary tuberculosis, quarantinable diseases and mental diseases are usually excluded; obstetrical patients may be included after a reasonable waiting period. The confusion and conflict which are apt to arise where responsibility is divided are avoided by excluding care already provided for under workmen's compensation laws.

Subscribers must be made to understand just what the hospital will and will not do under the agreement; in presenting the plan to the public, its limitations should be stated with proper emphasis.

#### *Finances*

In existing group hospitalization plans, from six to twelve dollars per year is the range of rates charged. The amount required will vary with the general cost levels of the locality, with the scope and character of services offered (these will be influenced by local custom), with the age and occupational character of the subscribers, and according to the requirements for promotion and administration.

A time limit on the length of stay of all patients in the hospital during any given illness is an actuarial requisite and is usually a three weeks' period.

It is possible that in case of widespread disaster the demands upon hospitals may exceed their utmost capacity after all efforts have been exhausted to meet the pressing situation, and it is usually provided that in such an event the hospital organization will reimburse the subscriber with a specified amount, say a sum equal to the annual subscription (in a few instances twice this amount). This is, of course, a contingency which will not ordinarily have to be met.

When risk or expense is reduced by the enrollment of a large number of subscribers in a single group, or when the group is of such age or occupational class as to lower the risk, a reduction in the annual subscription rate may be allowed.

When the adopted rate is found to yield a sum which is greater than is necessary to meet hospital costs and to provide a reasonable reserve, the

surplus should be employed for the benefit of subscribers, either in the form of a reduction in rate or of an extension of hospital services.

When owing to unexpectedly high sickness rates the payments made by subscribers to the organization fail to cover hospital costs, subscription rates must be increased unless a reserve fund has already been built up out of which the deficit can be met. In the absence of a reserve fund and before the newer rates become effective, the participating hospitals may have to accept payments that do not fully cover their costs of maintenance; losses of this kind are, however, likely to be offset by the increased number of paying patients and the lower number of free patients which result from the plan.

If estimates based upon past experience indicate that the payments to be made by subscribers will be sufficient to enable the fund to reimburse participating hospitals at a given rate per day (whether this be \$5.00, \$5.50, \$6.00, \$6.50, or \$7.00) a fraction of this amount (50 cents to \$1.00 per day) may wisely be withheld for distribution in whole or in part at the end of the fiscal year, in order to ensure an equitable administration of the fund in case the morbidity rate for the year should be unexpectedly high.

The basis on which hospitals are to be paid from the central fund should be alike for all, when similar services are offered to subscribers.

#### *Stages in the Development of a Group Hospitalization Plan*

There are three stages in the development of a plan. First, what may be called the technical stage, during which the hospitals themselves, with such legal and other advice as may be required, determine upon the services to be offered and the rates which they believe to be sound. Second, the promotional stage during which this plan has to be organized in working form and accepted by groups of persons who are ready to pay for the services offered. Third, the administrative stage when the plan is actually in operation and must be capably managed.

In a community with only one hospital, what is referred to above as the technical stage should be developed by the governing body of the hospital with the counsel of its medical staff.

In communities with more than one hospital of good standing the initial stage of the plan should be carried through by a representative group or organization of hospitals themselves, with the counsel of physicians of standing representing the hospital staffs and, if possible, the local medical societies. The permanent controlling organization, representing the hospitals, may enlist the aid

of an advisory body including representatives of the medical profession and the public.

#### *Effective Presentation to the Public*

The problems of promotion and of enrolling groups of subscribers are not ordinarily familiar to hospital personnel and generally will require the participation of expert and experienced persons. In some instances it may be best to appoint a private agency, specializing in such work, to render service or to furnish persons who will render expert services, but payments to such an agency should not be allowed to diminish unduly the benefits received by subscribers.

#### *Control of the Plan*

The control of the plan as well as the direction of activities incidental to it must remain in the hands of a nonprofit organization composed of or representing the hospitals, and must not be transferred to an employed enrolling agency. Hospitals should decline to enter into contracts with any business agency which controls or seeks to control the finances or management of the plan.

#### *Legal Advice*

During the first or technical stage, group hospitalization plans should be discussed with competent legal counsel in order to ensure that they conform to the laws of the state and locality. Insurance commissioners in over a dozen states have ruled that hospital service rendered to subscribers in an annual payment plan is not insurance.

### After the Patient Leaves

"It has been the custom for hospitals to appraise their clinical work by a survey of the mortality, infections occurring in the hospital and length of the patient's stay in the hospital, to which is added the condition of the patient on leaving the hospital—improved, unimproved or dead," according to Dr. Bowman C. Crowell, director of clinical research, American College of Surgeons. "It has always seemed to me that this latter survey must be a relic from the times when hospitals were used chiefly for epidemic diseases and the emergence of a live patient from the hospital was deemed worthy of record. Surely we have long passed the stage when this is true, and the only measure of success of the hospital today is the condition of its patients after they have left its doors," he declared.

"How much does the average hospital know about this condition? And how much does the average hospital try to find it out? The answer to both questions is well known—'very little.' Some may say that it is the duty of the doctor and not of the hospital to know the future of the discharged patient. How then is the hospital to know that the work of its staff members merits their continuance on the staff?"

"The hospitals should develop more and more into community health centers and centers for the collection and diffusion of knowledge on subjects pertaining to health."

## *The Hospital and the Medical Staff:\**

# The Neurosurgical Department in the Hospital

By IRA COHEN, M.D.

Neurosurgeon, and

JOSEPH TURNER, M.D.

Director, Mt. Sinai Hospital, New York City

HOSPITAL officials have been diligent in their search for the ideal in medical staff organization. Published expressions of opinion on the subject are not lacking; if collected they would make several large volumes. Continued publication of divergent plans for staff organization indicates that the search for the ideal has not as yet led to the discovery of a plan that is universally approved or that an acceptable plan need not necessarily be of a single uniform pattern, applicable to all kinds and sizes of hospitals under all conditions. Local traditions, community needs and individual preferences, aptitudes and abilities join often to defeat the aims of any reformer whose limited experience and unbounded enthusiasm lead him to sponsor a fixed standard as the ideal of staff organization.

### *Motives Not Always Noble*

The hospital administrator is frequently puzzled when asked to evaluate the merits of a proposal for the creation of a new clinical division, either as a new entity or by splitting an existing division into two or more departments of a more highly specialized character. Such a proposal opens up a vista of endless divisions and subdivisions of clinical departments, of specialties within specialties. The motives that prompt these recommendations and on occasion influence their approval, are sometimes less than noble. The hospital official, with an eye to an elaborate and formidable annual report listing many departments and a large staff of physicians with resounding specialist titles, may be tempted to encourage the multiplication of clinical divisions, and thus make the staff organization impressive, in its bulk and complexity, to the uninformed reader. Equally indefensible is the

creation of a clinical division at the behest of staff members who are in search of new titles for personal aggrandizement only.

The subdivision of large unwieldy clinical units into smaller serviceable groups is quite another matter, for here the motive is impersonal and is the expression of a sound administrative purpose. To test the legitimacy of the proposed new department one may ask whether the new unit will be large enough and sufficiently well equipped to enlist the active interest of a qualified special group who will utilize its resources and opportunities not only for the benefit of the immediate patient on the specialty service but for the general elevation of medical standards and practices in the hospital. A test of this kind applied to proposals for new divisions would automatically exclude many insubstantial units in small hospitals but would preserve those in larger hospitals where the number of available ward beds is large enough to provide for the assignment of a reasonably large number of beds to each unit.

### *Doctor Goldwater's View*

The question now arises as to how large a hospital should be to justify a division and subdivision of the major services of surgery, medicine, pediatrics and obstetrics, into smaller specialty units representing the whole gamut of modern specialized practice. Dr. S. S. Goldwater, hospital consultant, New York City, who has had a unique opportunity to observe this problem in scores of hospitals over many years, declares that: "In the general hospital of suitable size, say a hospital of about five hundred or even six hundred classified beds (in this figure unclassified and private rooms are not included) there is, or can be provided for each of the various medical and surgical specialties, a sufficient number of beds to afford to each specialist that volume of clinical material which is

\*This is one of a series of discussions for the purpose of ensuring better team work in the hospital through a fuller understanding of the interrelated problems of the medical staff and the administration. The first of the series appeared in the January issue.



necessary for group study, for related laboratory research and for specialized medical training."

The recently published final report of the Commission on Medical Education criticizes the current trend toward specialization in the following words:

"Partly because of the skill required in the use of certain instruments, undue emphasis has been given to the various specialties, a number of which have been developed around technical procedures. There has been an extensive subdivision of labor in the field of practice. . . . This subdivision of labor, however, has gone beyond the actual needs of the community and of most patients. It has been greatly overdone, especially in the large cities.

"The tendency to partition practice into organs, systems and techniques, with consequent dispersion of responsibility for the patient as a whole, not infrequently turns out to be unnecessary, costly and misleading. . . . Because his efforts are often confined to a single phase of medicine, the specialist looks too frequently upon the problem of the patient solely from the aspect of his specialty, rather than from the needs of the patient as a whole. . . .

"Specialism is an essential part of modern medical practice. To it must be credited no small part of the advances that have occurred in medical knowledge and practice in recent years. It is recognized, however, that many specialists are self-named; many are not fully trained even in their limited field and are still less well equipped in the broad fundamentals of medicine; some are frankly commercial."

#### *Surgical Beds Divided Into Six Groups*

In the following paragraphs will be reviewed the factors that prompted Mt. Sinai Hospital, New York City, to establish recently a department of neurosurgery as a specialized surgical group. Of the more than five hundred beds assigned to ward patients in this hospital, upward of two hundred are allocated to major surgery including gynecology. These are exclusive of beds assigned to the eye, ear, nose and throat services. For the purpose of clinical classification and in order to have units of workable size, the surgical beds are divided into six groups, a comparatively small group for orthopedic surgery and five groups of approximately forty beds each, one for gynecology and four for general surgery.

Although labeled surgical without further qualification, these four services have for nearly a score of years taken, as groups, a particular interest in special surgical problems, in addition to carrying their share of the load of routine surgical work. Thus, one service concentrates on surgery of the

gastro-intestinal system, a second on the genito-urinary tract, a third on the chest, a fourth on the nerve system. These specialties were maintained along with general surgery, and in this way, without being definitely labeled as neurosurgery or gastric surgery, and without the creation of new specialist titles for the staff, each surgical division accomplished its aim as a specialty group. By continuing to devote part of their time and attention to general surgery, the surgeons avoided the narrowness of mind and the distorted technical development which too frequently come to those who limit their field of surgical endeavor to narrowly circumscribed clinical material.

#### *Neurosurgery Separated From General Surgery*

All surgical specialties can be carried on in this manner as part of a general surgical service and, in fact, this is the accepted practice in hundreds of small hospitals. Given the diagnosis of brain tumor, the indications for operation, the ability of the surgeon to serve, and the consent of the patient, any general hospital bed becomes for the time being a neurosurgical bed. Little more is needed, as the operating room equipment, instruments, and routine are in the main the same as those required for general surgery. There may be needed a few items of special equipment, an operating table with a brain surgery head rest, an electric cautery, perhaps some special retractors and dressings, all of which will vary with each surgeon's personal preference.

Neurosurgery was carried out effectively in this fashion at Mt. Sinai Hospital for more than a score of years by surgeons who, lacking the sanction of the board of trustees, could not claim the title of neurosurgeons, but who nevertheless achieved an international reputation in this highly specialized branch of surgical practice.

It was observed early that many neurosurgical patients do not come to the hospital as such, that they are admitted with neurologic symptoms to a neurologic service, and that the nature of the clinical problem and the need for surgical intervention are determined later. This led naturally to the adoption of the practice of keeping these patients on the neurologic service, not only for diagnosis but for operative and postoperative care, instead of making a formal transfer to a surgical bed. When the postoperative wound was healed, the patient continued to receive treatment, if necessary, under the direction of the neurologist until his final discharge.

Many years' experience, however, has shown that the diagnostic and surgical needs of neurosurgical cases are quite unlike those encountered in other surgical specialties. The intimate knowl-

edge of the finer points of neurologic diagnosis, the peculiar and specialized technique of its surgery, the many hours required sometimes for one surgical operation, the high mortality rate and the relative fewness of operative patients, did not encourage many surgeons to give this specialty the particular study and interest which it needed and deserved. Thus neurosurgery became the prime interest of an interested and enthusiastic but limited few who were rewarded with increased knowledge, experience and reputation, and eventually with an increase in the number of patients referred to the hospital for neurosurgery, by co-operating practitioners.

With growing experience, it was finally decided that neurosurgery could be separated from the general surgical group with advantage, and that its withdrawal, even though this would mean some loss of opportunity for the younger surgeons to learn more about neurosurgery, would not be so serious a matter as the spreading of these patients thinly over a large field of general surgeons none of whom could reasonably hope to become a master. Furthermore, the medical profession and the informed lay public were asking more insistently for trained specialists for these highly technical surgical operations.

#### *What Is a Neurosurgical Patient?*

Prompted by these considerations, the hospital decided a year ago to separate neurosurgery from general surgery and to give it a distinctive title and a separate staff. This has meant little more than a separation as a formality, for the work continues to be carried on by the same men as of old. Now, however, they are recognized and appropriately named as a special clinical group. The service requires a staff consisting of an attending neurosurgeon, assisted by an associate neurosurgeon and an adjunct neurosurgeon. Intern service in the ward and operating room is rendered by a neurologic house staff of four residents and interns. The patients are housed as a general rule in the neurologic wards and may occupy as many of the two score beds assigned to the neurologic service as may be required. If need arises, additional beds are available in the surgical wards. The operating, laboratory and other auxiliary diagnostic and therapeutic services are provided by auxiliary hospital departments which serve all of the clinical services.

A definition of a neurosurgical patient which will describe him in precise terms with sharp boundary lines, separating him from surgery, otology, ophthalmology, has yet to be written. The history of the development of any specialty will show that it goes through more or less expansion

and contraction in its evolution. At its inception it is narrow in its outlook. In its expansion it reaches out for border line and allied conditions, and finally it loses part of itself to a new specialty of its own making. The word "finally" should really not be used as at all times the boundary limits are in a state of flux, as advances in knowledge enlarge or contract the horizon of that particular specialty. It is for these reasons that the duties of a neurosurgical service can, within certain limits be as many or as few as the policy of the hospital dictates. That is to say, its work can be limited to spinal cord and brain tumors plus the operative treatment of trigeminal neuralgia, or it can be brought into cooperative relations with many of the services in the hospital.

#### *Neurologic Service Is Important Ally*

Of the personnel of the service little need be said except to point out that in no branch of surgery is it more important for the operating team to be constant. In no branch are results more dependent on attention to details before, during and after the operation, and proper attention can be given only by those familiar with the details. Once operation is decided upon, the surgical management of the patient is the duty of the neurosurgical service. Up to this point, however, the diagnosis is the result of teamwork of various services.

The most important neurosurgical ally is, of course, the neurologic service. Whether brain tumor suspects should be admitted first to a neurologic service for study and then transferred to the neurosurgeon or admitted to the neurosurgical service and subsequently seen in consultation by the neurologist, is perhaps a matter of choice, but the final diagnosis should be a result of combined effort. Second only to neurology in this relation will come the eye service and the roentgen ray department.

As stated above the work of the neurosurgeon may be limited to the treatment of brain and spinal cord tumors and the operative treatment of trigeminal neuralgia. The treatment of brain abscess should come within his province. Whether it does or not will depend largely on the attitude of the otologist and the rhinolaryngologist, as most brain abscesses are complications in their fields. The occasional abscess that arises from other causes will of course come to the neurosurgeon, the others should come, and in our institution they do.

Just as the care of brain abscess depends on the attitude of the service involved, so will the attitude of the general surgeon determine whether fractures of the skull, injuries of the spine with cord



symptoms and nerve suture remain on the general surgical service or are given to the neurosurgeon. Of these he is least likely to see primary nerve injuries as they most often are part of more extensive surgical lesions. Secondary nerve repair should be the responsibility of the neurosurgeon.

In times past the general surgeon has cared for fractures of the skull. But the trend of opinion now is that this group of cases is undoubtedly best cared for by the neurosurgeon. While operative treatment is the exception, when operation is indicated there can be no question that a surgeon familiar with handling brain tissue should be selected. Because of its frequent intracranial complications osteomyelitis of the skull would come under the care of the neurosurgeon. This is also true of osteomyelitis of the vertebra.

Surgery of the sympathetic nervous system may be one of the points of contact of the neurosurgeon with the general medical service, although it is not in a strict sense a neurosurgical problem. The selection of cases for this procedure is the joint duty of the neurosurgeon and the medical service, but the actual surgery can be done, if desired, by a general surgeon, for a good abdominal surgeon is able to expose the lumbar ganglionic chain. The thoracic surgeon need not call on the neurosurgical service for a phrenic nerve excision, nor need the general surgeon call on this service for a gan-

glionectionomy as in Hirschsprung's disease, but it may well be that the general surgeon might prefer to have this type of case handled by the neurosurgeon.

Aside from the treatment of *tic douloureux*, there are many conditions where pain is the outstanding complaint which will bring the neurosurgical service into close contact with many other services. Of these, a department of radiotherapy is most important. This service sees patients with extensions or metastases from a malignancy, patients suffering excruciating pain sentenced to morphinism and perhaps not finding relief. By chordotomy, by nerve sections or by nerve injections, the neurosurgeon can often serve and relieve the patient who has been referred unsuccessfully to the department of radiotherapy. The use of paravertebral block in angina pectoris brings the neurosurgeon into contact with the medical service.

Space limits this review of the functions of the neurosurgical service to these few comments, but from what has been said it may be seen that the neurosurgical service can in addition to the brain and spinal cord tumor work serve a broad and useful function in its relations to the other services of a general hospital which is large enough to create and maintain under adequate and proper conditions this highly specialized surgical division.

## Every Hospital Needs an Efficient Accounting System

By R. E. HANDY  
Lansing, Mich.

A popular misunderstanding of the present day is that a modern accounting system is predicated upon the making of profits. The opinion seems to prevail that if an institution is not organized for the purpose of producing profits there is no need for efficient business administration. The argument implies that unless there are dividends to share or a board of directors to demand a profit and loss statement, a good accounting system is an unjustifiable luxury.

The glamour that surrounds the determination of dividends tends to hide the important part that good business procedure plays in the management of modern industry. General impressions and guesses must give way here to exact knowledge. The swift moving current of business activities puts the man who carries his business in his head at a serious disadvantage. He can no longer gather a complete picture of his affairs by mere observation. Decisions based upon partial and disproportioned surveys are indeed dangerous. It may be safely said that where competition is keen and economical management is a matter of profit or no profit, an analytical accounting system is a necessity.

But if accounting is of real assistance to those who must economize to get profits, of how much more assistance

should it be to those who profess to be without even the margins of safety that profit affords. If a thoroughgoing accounting system is valuable in preserving profits, it must be doubly valuable in safeguarding the dispensation of charity. Therefore, the hospital, being essentially an agency of charity, must carefully examine its business procedure. The manufacturer and merchant may blaze the trail of business efficiency, but the hospital superintendent must not lag far behind.

It is sometimes said that a hospital is not capable of the same business treatment as a manufacturing or mercantile unit, but careful analysis shows that this is not true. In every hospital there is a direct ratio between the cost of service rendered and the value received by the patient. In this respect the hospital is a commercial venture. Both the hospital and the manufacturer in a plant production are units of service. The one produces patient days, the other sewing machines or automobiles. Just as the plant manager knows the relationship between the cost of each type of unit produced and its sale price, so the hospital superintendent should know the cost of the patient day and its income possibilities. The function of each executive is primarily the same; each is entrusted with responsibility in an organization spending large sums of money, and the chief concern of each is to achieve the wisest expenditure of effort in terms of the units of service they produce. If sound business methods contribute materially to the success of the manufacturer, so must they serve the hospital superintendent.



# Editorials

## Detours and Mudholes in Group Hospitalization

THE president of the Medical Society of the County of New York in his inaugural address last month made the following statements: "No other proposal that has been put forth to reduce the costs of illness has the practicability of the Hospital Information and Service Bureau's plan for the group purchase of hospital care. If the hospitals undertook to provide this type of coverage, it has been computed that they could, without loss, supply twenty-one days of semiprivate care for an annual charge of ten or twelve dollars. The premium covers all institutional expense except medical service, special nursing and blood transfusions. . . . One of the major virtues of this proposal for group provision of hospitalization is that it does not interfere in any way with the freedom and privacy of the relationship between doctor and patient. . . . The Medical Society of the County of New York is prepared to bend its efforts toward the successful application of any practicable, self-supporting scheme to reduce the costs of hospital care to the middle class."

Hospitals should be gratified at this expression of medical opinion, which contrasts with the obstructive attitude of Philadelphia, of which the *Philadelphia Record* said editorially: "The doctors have a perfect right to oppose any such schemes as these. But they have these rights only if they present plans of their own for coping with the serious situation which these projects were designed to meet. We know that 12,000,000 Americans can afford no medical attention whatever. We know that to at least 50,000,000 more serious illness means financial distress. These human beings must be cared for. Some means of squaring their plight with the interests of the hard-hit physicians must be found."

Hospitals should not be diverted from their purpose of trying out plans of importance to themselves and to the public because of the fear of something new or because voices are raised pointing out a long succession of possible evils. Hospitals should look to their own state and national bodies for the formulation of principles under which group hospitalization should proceed. It is wise to avoid unnecessary detours and not to stall because of mudholes.

The very importance and timeliness of the plan

of group hospitalization have given rise to issues that hospitals must consider carefully. There is the danger of commercialism on the one side as well as that of obstruction on the other. The prime reason for any group hospitalization plan is the same reason that called hospitals into being, namely, service to the sick. A group hospitalization plan should enable thousands of persons to pay for service in a self-respecting way who now must receive it as charity or who contract debts which they cannot pay in whole or in part. The mere fact that thousands of people feel the need of making provision for the expense of a possible stay in a hospital opens the door of opportunity to the commercial agency and sometimes the commercial adventurer. There seems to be a growing number of this brood who for their private profit are trying to sell group hospitalization to individuals and to enlist hospitals in their enterprise. "Four cents a day will do it" announces the sales literature of one organization. Perhaps these promoters cannot be put out of business. But they can be avoided or controlled.

It is well for hospitals to remember that in a city of any size where there are several hospitals, no institution can wisely undertake group hospitalization alone. It is well to remember that skill and experience are necessary in order to organize a plan so as to secure the actual participation of wage earners and other employed groups or organizations who will be the beneficiaries of the plan. The skill and experience of men who know how to organize and get such a plan under way must be paid for, but the important point is to avoid placing the control of the plan in the hands of any group not motivated by the spirit of the hospitals themselves—public service. Hospitals must avoid detours into commercialism which are likely to add 50 per cent to the cost to the patient and to involve promises without performance.

## Economics

HIGH crimes against ethics, clear vision and good judgment are being perpetrated in the name of economics. Few appear to understand the meaning of the term. The physician believes that his practice is decreasing because, to a degree at least, the hospital is competing with him. The hospital's income is decreasing because the doctor does not refer a sufficient number of patients to its private rooms. Dispensary abuse, laboratory and free ward profiteering appear to some physicians as frank injustices to them. Preventive clinics are said to divert patients from the doctor's office.

Both the physician and the hospital are right and they are wrong. Dispensary service will always to some degree be abused unless some new method of differentiating between the pretender and the deserving recipient of free service is discovered. The preventive clinic in reality is a finding activity because its teachings as to the need for periodic health examinations and the advantage of keeping well are sure to be advantageous to both patient and physician. What is needed most in these troublesome times is constancy of vision, an unswerving belief in the future and an equanimity of spirits to prevent the adoption of any policies and beliefs because they seem to be temporarily expedient.

The physician and the hospital are necessary each to the other. No turmoil of discussion as to present trends or future policies should be allowed to disturb this splendid relationship.

### Methods of Progression

**M**AN is largely distinguished from the lower animals by his ability to reason, the possession of ethical and moral concepts and his vertical position during progression.

But all human beings do not exhibit a stalwart upright front when difficulties confront them. There are those whose lives consist of persistent attempts to evade the responsibility of making and supporting decisions. These may be said to be quadruped in their tendencies—they crawl through the day's difficulties.

There are quadruped hospital executives who never figuratively, with body erect march confidently forward, but who with subservient acquiescence to every wish of board members and others, avoid any semblance of individualism. There is the executive who with waspish irritability repulses any constructive suggestion offered by those around him. There is the superintendent who courts not friction but who calmly weighs all policies in the balance as to their beneficent tendencies as far as the hospital is concerned but who once his opinion has been formed supports it with all his strength.

The mollusk, the wasp, the calm intelligent director of hospital activities—these three—but the most to be pitied is he who fears to speak lest he discover someone who differs with him. Boards of no vision prefer the executive who progresses by crawling; those who have learned the lesson of the benefits to be derived by affording their superintendent intelligent support and never inflicting petty subordination, demand one who thinks for himself.

### De Profundis

**G**RADUALLY but certainly the hospital is emerging from the depths of economic despair. To be sure there will be observed in the graphic chart of convalescence temporary elevations and depressions of the recovery cure. The patient who has been grievously ill with typhoid fever does not reach normalcy in a day. His chart displays the classical steplike decline of fever and each day he waxes in strength and vigor. The economic epidemic shows unmistakable signs of receding. The hospital world, sharing in the general improvement of morale, now should plan for the future.

Nor in many instances has the necessity for readjustment wrought harm without the accompaniment of a definite good. With the practice of economies made because of dire necessity, with the reduction in overhead expenses, with the realization of the difference between essentials and frills, the hospital of today rests on a firmer foundation perhaps than was the case when funds were obtained with but little personal or group effort.

The institutions that now begin to plan for fairer days when prosperity shall have returned, will later surely outdistance their laggard fellows in scientific accomplishments.

### Maintaining an Even Keel

**T**HE hospital, like an individual, has a personality of its own. This rather abstract quality distinguishes it from all other institutions in the field. Some are leaders; some only follow; all are intentionally humane and many hold in high regard the fine traditions of many decades of service to their communities.

But worthy traditions are but the result of long years of repeated helpful acts. To carry on persistently through fair weather and foul, there must be a constancy of ideals which steadfastly governs hospital policies no matter how the local economic or social conditions may temporarily vary. Sir William Osler's often expressed three ideals of life could with profit be adopted as the aims of all hospitals in the field: to do the day's work well, to follow the Golden Rule and to cultivate such a measure of equanimity as to bear success with humility, the affection of friends without pride and to meet trouble with courage. The hospital rarely fails to exemplify the first two of these ideals. To it, at the present time, is presented an opportunity to display an Oslerian equanimity in regard to its finances. To adopt any hastily conceived policy of retrenchment by which tempo-



rarily to stem economic difficulties appears unwise. It is an act of panic not justified in consideration of past events or in the light of probable future prosperity.

The stabilizing effect of invested funds like the leaded keel of the three-master has in the past stemmed many a financial flurry in the business as well as the institutional field. *Equanimitas* is a splendid watchword for harried hospital directors. The quality of institutional leadership is needed now as never before. When less seaworthy hospital barks observe their more stable institutional colleagues calmly riding the troubled financial seas, they will surely gain courage and refrain from adopting policies of questionable wisdom. He who rocks the boat now is more certain of coming to grief and of delaying hospital progress than in other days of calmer financial seas and of fairer professional skies. Moreover, it is impossible to allow any of the chain of social institutions to falter without unfavorably affecting others of the group. By so doing, society will surely be forced to pay exorbitantly for such lack of vision in terms of needlessly broken bodies and minds.

The hospital, being the keystone of the social arch, must carry on until every resource has been exhausted because when health is gone, the whole community structure totters.

### Let's Play Fair

**I**S IT charity to take things without paying for them and give them away to someone who asks for them? Is it charity to buy on credit and run into debt when your creditors are unwilling and unable to carry your account and still maintain their own credit? In justice, you cannot spend another's money and you cannot distribute another's goods without his permission."

The above statement was made by the Rev. M. F. Griffin, Cleveland, a trustee of the American Hospital Association. There is no uncertainty as to its implications. The hospital has without question been under a strain in the past few months to meet its obligations. It has, nevertheless, endeavored to carry on to the best of its ability. In the struggle, however, objectives have sometimes become confused and ideals have become partly clouded. To incur a financial obligation without a strong probability that it can be promptly met is unwise. The fact that the hospital is performing a kind act in serving the sick does not excuse the harm done to those who sell food, clothing and surgical instruments to the hospital on a credit basis.

The courageous board of trustees will close the hospital doors before allowing dishonest tactics

to be used by the hospital in purchasing supplies. If time is needed to meet the month's bills there should be a frank understanding on this point at the time of the purchase. But to delay, to evade and finally to demand an adjustment on the basis of inability to pay in full is utter dishonesty. It is right and fitting for the hospital to give charity when financially able to do so, but false generosity at the unwilling expense of another must always be avoided. There is no twilight zone between honesty and dishonesty, between right and wrong. The moral and ethical laws which govern the individual apply also to the hospital. No matter how high its service ideals may be the hospital cannot plead immunity to these unchangeable mandates.

### Should the Hospital Stoop to Conquer?

**T**HERE are those in every walk of life who believe that the accomplishment of a laudable end justifies the application of a questionable means. To bring about a great good by the practice of a lesser harm is the essence of the belief of such persons.

There are others who scorn any compromise with the principles of ethics and who hew to a rigid line of right or wrong as it is given to them to judge the right.

To carry on the work of the hospital successfully, to provide humane and efficient service to those who most require it is an end much to be desired. And yet not a few believe that to adopt any practice that to them appears undignified or unethical in order to bring this about is far from justified. The discussion as to the advisability of the commercial exploitation in any degree of the hospital's prestige or its appeal to the generous spirits of a community has waxed and waned throughout the field for many months. To profit by the sale of flowers, meals, drugs or apparatus offends the ethical sense of many. To allow the work of the hospital to languish which could be relieved if not wholly remedied by the adoption of such apparently harmless practices is considered by another group equally reprehensible.

Certainly all will agree that the adoption of any policy smacking of dishonesty or foul play, or the practice of any sharp methods should never be connected with the administration of the modern hospital. It is not necessary for the hospital to stoop to conquer. Were it so, better the closing of doors than the surrender of high principles of ethics and fair dealing.



## The Problem of the Month:

# How Can Staff Members Be Stopped From Wasting Supplies?

A HOSPITAL superintendent has stated that there has been an unwarranted waste of cotton, gauze bandages and gowns occasioned by staff members in his hospital. The superintendent does not want to offend members of his staff because he realizes that they are working under great pressure when most of the waste occurs, but he does want to know how he can diplomatically check this leakage.

How have you done it in your institution?

*May A. Middleton, Superintendent,  
Methodist Episcopal Hospital, Philadelphia*

"Prices for gauze and cotton were much lower in 1932 than in 1931. But in these days of falling prices figures are sometimes deceptive. Therefore, in order to determine our costs accurately, we counted the yards and pounds used each year and averaged this against the number of patients admitted. It was found that our economy program had produced results. However, the waste was not entirely due to the amount used by the doctor.

"We charge each department with the weekly requisition. We keep a card index of the amount ordered monthly and constantly make comparisons.

"We have the storekeeper keep close watch upon his supplies in order to prevent the accumulation of excessive amounts. We estimate the amount used in six months and contract for that amount. Our contract is such that we receive the benefit of any drop in price of cotton during the period of the contract.

"We have a central supply room with a graduate nurse in charge. The supply room is on the operating floor and the nurse relieves in the operating room. The supply room is manned by one nurse and three ward helpers. All gauze and cotton are sent to the central supply room from the storerooms. It is then sterilized and delivered by requisition to the various floors. The requisitions must be countersigned by the superintendent of nurses before being filled. She receives a monthly report of all the requisitions used in the hospital.

"Each floor must return all unused supplies to

the supply floors each week before receiving the new requisition. This prevents repeated sterilizing of the unused supplies.

"The superintendent of nurses holds each supervisor responsible for the amount used on her floor. Naturally the supervisor watches the doctor. Thus, without making a real issue with the doctor, we have made a substantial saving by this plan of supervision.

"Our greatest saving has been in obstetrical pads. We have made a substantial saving in the amount of gauze, and the number of gauze sponges and combination rolls used. We have not yet made any saving in the amount of cotton. But we are not forgetting that eternal vigilance will be necessary to equal the saving of 1932 in the other articles."

*J. R. Mannix, Assistant Director,  
University Hospitals of Cleveland, Cleveland*

"The problem of waste of medical and surgical supplies by the attending staff can best be controlled by an organized professional staff interested in the economic aspects of hospital operation. If the hospital has an organized staff with functioning committees, which are regularly informed by the hospital administrator of the various hospital problems, much of the waste with which hospitals are confronted can be eliminated.

"I should like to call attention to an article entitled 'How Doctors' Extravagances Affect Hospital Costs,' by Dr. George Edward Follansbee, Cleveland, which appeared in the August, 1931, number of THE MODERN HOSPITAL. This article is the most intelligent discussion of the subject I have ever read. The University Hospitals of Cleveland have a medical council that is made up of the chiefs of the five major services, the president of the board of trustees, the dean of the school of medicine and the director of administration of the hospitals. This council meets monthly to discuss professional problems, and of course any problems having to do with unwarranted waste of materials by either the attending or resident staffs are referred to it. It has been the experience of the administration of the hospitals that if the problem

is properly presented to the medical council the waste is either entirely eliminated or greatly curtailed.

"A great deal of the waste of professional supplies is not the fault of the medical profession but is due to the fact that the hospital has not developed proper standards of procedure. Each type of surgical operation, as well as other professional procedures, on the floors, should be studied and a standard equipment and supply list set up for each of these procedures. Also, a study of the types of supplies that are necessary for the various procedures should be made. For example, is there available only a three-inch bandage when a two-inch or a one and a half-inch bandage would be more satisfactory for the purpose? Are hospitals setting up a half-length of catgut when a quarter-length would suffice for a given purpose? The University Hospitals have studied all of the various procedures and have developed a standard equipment and supply list for each procedure."

*Paul H. Fesler, Superintendent,  
Wesley Memorial Hospital, Chicago*

"How to control the use of cotton, gauze, bandages and gowns has always been a problem, as it is difficult to instruct staff members in the use of such supplies. At the University of Minnesota we found that there was a definite saving by the use of ready-cut dressings.

"I think that the supervisor of the operating room has more control over the use of supplies, than anyone, and, if she is a real diplomat and is systematic and economical herself, this is usually reflected in the methods of the staff.

"I think one of the big costs in dressings is the time consumed in making such dressings and a great deal could be saved if we could get the staff to agree on a standard dressing for all. This can be done only by continued education."

*Dr. J. R. Clemmons, Assistant Director,  
Strong Memorial Hospital, Rochester, N. Y.*

"In order to avoid waste of supplies intended for use in the surgical care of patients in the Strong Memorial Hospital a system was instituted that would give an accurate comparison of supplies used in the various departments of the hospital.

"All materials used for making dressings, solutions, and similar items are charged out of the general storeroom into a central surgical supply room. Sterile supplies, such as gauze, pads, sponges, cotton, solutions and gowns, for use in the operating rooms, are issued from this point.

"Supplies are issued daily and on requisition only. The director's office checks the requisitions against the daily operating schedule and house census. If a division or operating room is thought to be using an undue amount of supplies, an explanation is requested. If an individual doctor or group of doctors is found to be at fault, the head of that particular service is asked to cooperate in cutting down the waste of supplies.

"We have been able to reduce waste to a minimum through this form of cooperative teamwork, instead of employing direct criticism of the individual."

*Dr. Charles E. Remy, Superintendent,  
Minneapolis General Hospital, Minneapolis*

"The best way to check leakage such as unwarranted waste of cotton, gauze bandages and gowns, through carelessness on the part of staff members is by the establishment of proper sympathy between the staff and the superintendent of the institution.

"In my judgment, the average attending and resident staffs of a hospital welcome a rather strict supervision of the work of their departments by the superintendent. Particularly do I find this to be true if the superintendent establishes a friendly relationship with them whereby he delegates to the chiefs of service or the responsible individuals of the various staff divisions a coresponsibility in the matter of such control.

"In the natural course of events each hospital superintendent should believe that he has the most cooperative staff in the entire country. He should attempt to convince the members of his staff that this is his belief, and if he does this the superintendent will be surprised to find that in a short time he will sincerely believe so himself. If he believes it strongly enough, he will soon imbue his staff with the desire to make his belief a fact beyond contradiction. I am sure this can be done by any superintendent who has the interests of his staff as well as of his institution at heart. When analyzed this merely means that the superintendent must take the controlling members of his staff into his confidence as to the many problems that confront him in the hospital. The superintendent should cultivate the habit of saying 'our problem is thus and so' instead of 'my problem is thus and so.' This little thing in itself will accomplish wonders.

"In addition to the above attitude on the part of the superintendent, certain other programs may well be instituted. For example, at the Minneapolis General Hospital the following procedures have been instituted to eliminate waste:

"Head nurses receive a monthly report of the cost of their department and it is possible for them to ascertain from the nursing school office the comparative costs of other nursing stations. This establishes a certain competition between various stations to decrease their costs and to watch more carefully the consumption of supplies.

"Reports of waste of materials by doctors, and more particularly by members of the resident staff, are made by the head nurses of the various divisions to the nursing school office. The superintendent of the nursing school discusses these reports with the superintendent of the hospital. If some member of the attending staff is unduly careless in his use of supplies, the superintendent of the hospital takes the matter up with the chief of that particular staff division and passes the responsibility on to him for correcting the situation. In no instance does the hospital superintendent go over the chief's head directly to the attending staff member concerned. If the wasteful person is a member of the resident staff, the superintendent calls the superior officer of this individual to task and solicits his cooperation in correcting the situation.

"Reclamation of gauze is practiced, and in my opinion, savings thus achieved are considerably more than the time of employees consumed in such reclamation. The reclaiming of gauze also serves to emphasize the necessity for avoiding waste.

"The daily issuing of dressings tends to prevent the accumulation of such supplies on the stations. Within the past year the Minneapolis General Hospital has established a central sterile dressing supply room where all sterilizing is performed. The dressings are made up and sterilized in this room, and supplies are secured daily by requisition from the various stations. Sterile trays of all types are maintained in the supply room, and they are requisitioned when needed instead of being made up on the station, as was the previous custom. As a result, it is no longer necessary to keep several trays made up on each station, and therefore the quantity of supplies out at any one time is smaller.

"Every institution should have an established system whereby all requisitions are checked and approved by the central nursing office before going to the issuing department. This helps considerably in eliminating waste in usage.

"Gowns should be resterilized, when not soiled, without being sent through the laundry. This eliminates wear and tear and is a direct financial saving to the hospital. The conservation of gowns is a difficult problem, however, because stinting is not a good policy. Cooperation on the part of the attending and resident staffs is the only method

of preventing the use of too many gowns. In fact, all articles of linen used in the operating room, if not soiled, should be reesterilized without being sent through the laundry.

"Every institution has some leakage. A shortage of nurses and extreme pressure of work tend to increase waste. Strange to relate, a superfluity of nurses and staff, with or without pressure of work, tends to do the same thing. This means, therefore, that one of the superintendent's problems is to see that both the attending and resident staffs are well balanced in proportion to the actual service needs of the institution. Waste of stationery, matches, razor blades, instruments and similar items are generally due to about the same causes as waste in linen supplies and can be controlled in much the same manner.

"Careful checking of condemned goods also tends to prevent waste. A tendency toward increased demands for glassware, such as syringes and thermometers, can often be checked by instituting a policy of payment for broken articles over brief periods of time.

"The waste of adhesive tape can be reduced by using mechanical carriers upon which are placed rolls of adhesive of varying widths, thus eliminating the necessity for tearing the tape. The lumping or solidifying of adhesive tape rolls, which causes considerable waste, may be eliminated to a considerable extent by developing a device for enclosing the rolls so that they cannot be handled during manipulation.

"The greatest of all aids to conservation of supplies of every type is the imbuing of the attending and resident staffs with a sense of coresponsibility with the superintendent in the hospital's administration."

*Elmer E. Matthews, Superintendent,  
Wilkes-Barre General Hospital, Wilkes-Barre, Pa.*

"I have never experienced any serious trouble in regard to the waste of cotton, gauze bandages and gowns by staff members.

"Occasionally, I do find in checking up that there is what I consider excessive use of these items, especially surgical dressings. I bring this matter to the attention of our superintendent of nurses and through her to the ward supervisors, who then observe a little more closely what the doctors are doing. In this way we generally find where the leakage is. I then bring the matter to the attention of the medical staff, at the staff meeting, or to the attention of the doctors individually, and have thus always had splendid cooperation in correcting any undue extravagance in the use of these articles."



## Practical Administrative Problems:

# What Constitutes Adequate Scientific Study of a Patient?

**D**URING the past few months there have been discussed in these columns certain matters dealing with hospital emergencies. It seems proper, however, temporarily to interrupt this series, to discuss the studies necessary for the making of a prompt diagnosis and for the early treatment of the patient.

Economy is today more than ever the watchword of the hospital executive. To avoid unnecessary and expensive activities in the day's work of an institution saves money. To eliminate non-essentials at the time of the patient's admission permits a restricted personnel to devote a greater amount of time to the service of the patient.

The specialty services of the average general hospital are expensive. But a few decades ago the cost of providing housing, heat, light and food constituted the major portion of the cost of maintaining the patient. There were no clinical laboratories, x-ray departments, metabolic or electrocardiographic divisions in the days of John Morgan or Thomas Bond. Even as the nineteenth century reached its last two decades, bacteriologists and chemists were but laying the foundation of today's accomplishments in these fields. The public had learned nothing of the complicated and costly studies that are now so commonly employed in the process of making a diagnosis. Indeed, a decade ago many of these procedures were entirely unknown. Too frequently the surgeon diagnosed and treated his patient through the same incision.

### *A Willful and Needless Waste*

Physical necessities for the care of the patient are likely to be the least expensive of the hospital's equipment. Housing, heat, light and food can be supplied today for but a fraction of the cost usually necessary for the maintenance of a patient. In many institutions food costs range from fifteen to twenty cents a meal, while the total cost per capita may approximate, for ward patients, from three to four dollars. A personnel of a highly trained type, and the numerous services now available for the patient where skilled persons are required are likely to account for at least 50 per cent of the total daily cost. Nevertheless, it has become necessary to provide highly skilled and usually

well paid physicians, nurses and technicians in order that the specialty departments which daily perform difficult and time consuming studies may function properly.

The expense, therefore, of nursing the patient, when coupled with the costly but necessary research and diagnostic procedures carried out in the laboratory, accounts for a large part of the daily cost of conducting the hospital. X-ray, clinical laboratory, electrocardiographic and basal metabolic departments are found in almost every modern institution. When, added to this expense, there is the cost of many examinations requested not particularly from the standpoint of type but of number, the unnecessary expenditure of money can be described in no other term than willful and needless waste.

### *Repetition of Tests Demands Scrutiny*

The value of the careful laboratory study of patients cannot be questioned. The physician, no matter how skilled, requires the specialty department, not always to make but frequently to confirm his diagnosis. Hence, a hospital must be equipped with all those physical and personnel requirements for the proper prosecution of modern study methods if it is to render an up-to-date service to its patients. It is not so much the type of specialty study, therefore, which demands scrutiny, as it is the unnecessary repetition of these tests, which should attract the attention of the executive who is seeking effective methods of economy.

It is particularly in the case of the ward patient that the hospital may save by judiciously restricting the type and number of laboratory procedures. In the instance of the private and semiprivate patient, the hospital is usually recompensed for this service. And yet, even with this type of patient, when a flat rate plan has been adopted, excessive and unnecessary laboratory work augments hospital deficits. In many institutions a flat rate is set, with certain exceptions, covering all types of laboratory work. Studies usually excluded from the flat rate plan are electrocardiographic, x-ray and basal metabolic examinations. If this fee approximates five dollars, excessive use of this privi-

lege causes an avoidable loss to the hospital. It can be said, however, that the flat rate plan has several advantages. It certainly encourages the physician to study his private and semiprivate patients more thoroughly. In institutions where what may be called an *à la carte* laboratory service is in effect, because the patient is required to pay for each examination, fewer studies are made, and the patient's chances for a speedy recovery are hence somewhat lessened.

It is interesting to note the great variation in the ratio of laboratory studies and admissions in hospitals. In some but two or three examinations per admission are carried out. In many others from six to a dozen or more examinations per admission are made. Many of these tests, of course, consist of urinalyses, but a considerable proportion also represent chemical studies on the blood, blood counts and other time consuming procedures. In hospitals that offer a flat rate for these studies the ratio is naturally and almost routinely a high one.

#### *A Wasteful Policy*

The practice of permitting the intern to decide both the nature and the number of specialty studies to be performed is a common one throughout the hospital field. This is a wasteful and ineffective policy. It is very common indeed to observe a chart order that calls for a daily urinalysis, without any additional information being gained through the repetition of this test. Such orders frequently are allowed to stand from day to day or week to week, entailing not only much loss of time on the part of the nurse in collecting urine specimens but also an even greater waste in time and money on the part of the laboratory personnel. Blood chemistry examinations repeated thrice a week are frequently observed without a semblance of clinical indication for such tests. A daily blood sugar estimation in the case of the diabetic is often necessary, but it is folly to require of a laboratory a daily repetition of such a test long after the patient's metabolic state has been standardized.

The nonmedical administrator rightfully inquires as to what is meant by "adequate scientific study." Do such studies lend themselves to standardization? Can a routine be established which while safeguarding the best interests of the patient at the same time tends to hospital economy? Here he treads on dangerous ground. Were he to insist that but two urinalyses and one blood count, for example, be carried out each week on ward patients, he would be acting unwisely. No hospital administrator can decide even though he be a physician the value of the steps required in order

that a diagnosis may be speedily made. At the same time the executive has a right to insist that the staff make such decisions and that an effort at standardization be conscientiously attempted. It certainly is possible to learn from a few well selected studies, repeated at reasonable intervals of time, all that it is necessary to know in order that a diagnosis may be made. If this is true, who should determine the nature and frequency of these studies and who should be responsible for ordering them?

#### *An Age of Laboratory Medicine*

As has been intimated, in most institutions the intern is the originator and the regulator of the routine laboratory work performed on the ward patient. There is no other department in the institution in which a second or third assistant is given the right to expend on his own initiative such large sums of money. Why should this be permitted in the case of often the youngest member in point of service of the hospital's personnel? Unfortunately the judgment of these young physicians is often faulty and it frequently happens that when a new or hitherto undetected symptom is noted an immediate expensive laboratory test is requested. It has been remarked with much truth that this is an age of laboratory medicine—that the visiting physician frequently allows himself, because of the pressure of time and work, to reverse methods hitherto practiced by allowing and expecting a specialty department to make his diagnosis. In the days of René Laënnec and Leopold Auenbrugger, physical diagnosis was just being born. The time consuming labors of these pioneers would have gone for naught, had there not followed a period in which clinicians found that the use of skilled special senses was usually sufficient to detect the presence and nature of most disease processes.

More to be regretted, perhaps, than the tendency on the part of certain mature physicians to slight the science of physical diagnosis, is the fact that there is being reared a new generation of doctors who, observing the practices of their seniors, are likely to perpetuate this error in the study of patients.

In some hospitals, splendid procedure books have been drawn up which outline for the guidance of the house physician the kinds of study he shall inaugurate upon the admission of patients suffering with various types of disease. Such lists of procedures are difficult to prepare but they encourage a thorough study of the patient and obviate the performance of unnecessary and time consuming tasks on the part of the hospital's personnel.

Certain laboratory procedures in many institutions are routine. Upon the admission of a medical patient, for example, a full blood count, a urine examination and a Wassermann test are often immediately ordered. In the average case, something more than a suggestion as to the nature of the illness can be learned from these studies. The examination of sputum is not routinely necessary except perhaps when the existence of pneumonia, tuberculosis, bronchiectasis or lung abscess is strongly suspected. With the exception of the first named disease, no urgency exists, and the intern may well wait until the first visit of his chief before proceeding further in his laboratory studies. The same may be said in regard to stool examinations. Of course, in patients suffering with gallbladder disease, ulcer of the gastro-intestinal tract, tuberculosis of the peritoneum and intestines, colitis, dysentery, cirrhosis of the liver or pancreatic disease, much information can be gained by a thorough laboratory survey of the patient's stool. Gastric analyses are important diagnostic tests. In all conditions of the stomach, gallbladder and pancreas, a study of the stomach contents is indicated. It will be observed, however, that not a few of these studies are of an elective nature and while in individual cases immediate requests for such work may be made to the advantage of the patient, still many visiting physicians require that a careful physical examination be performed before the services of the laboratory are sought.

#### *Basic Tests Often Only Ones Necessary*

In the surgical wards, frequently the basic examinations suggested for a medical patient are all that are necessary in the study of these patients. As is well known, an estimation of the number of white cells per cubic millimeter and a differential cell count are of first importance in the study of a surgical patient suspected of suffering with a purulent process. In the medical wards, a study of basic laboratory reports will serve as a means by which other and perhaps more complicated procedures may be suggested. For example, from a full blood count one may judge as to the existence of a primary or secondary anemia which, if found, requires more careful investigation. From a blood chemistry the existence of nephritis or diabetes may be surmised. A serologic test of course suggests the examination of spinal fluid, and the clinical search for other evidences of specific disease. In certain conditions, however, the procedure book should give a list of routine tests for the guidance of the intern.

In all primary or secondary blood diseases, a complete blood count, repeated perhaps twice

weekly, a fragility test, a platelet count, a count of reticulocytes, a coagulation time and the typing of the blood of all these patients, together with an examination of stools and gastric contents for intestinal bleeding, should be sufficient for an accurate differential diagnosis. To be sure, in institutions where research work is being performed many other studies are of course carried out. These procedures are required besides the basic tests suggested above.

#### *Many Tests Not Strictly Urgent*

In acute infections, in addition to cytologic studies of the blood, a culture of the blood stream itself and of all possible foci of infection, as well as of the urine, is indicated. Such blood cultures may be repeated at intervals of two or three days not only because the welfare of the patient demands early diagnosis, but also because one negative culture is far from convincing. Laboratory studies in the case of a patient suffering with pneumonia consist not only of leukocyte counts repeated every other day but also of blood chemical studies, at least biweekly. The sputum should be typed at once and perhaps a daily urinalysis is justified. The laboratory study of diabetes concerns itself largely with an estimation of the rise or fall of the sugar concentration in the blood. In addition to basic admission tests, a blood sugar test repeated as often as is necessary, during the study period, blood chemistry, Wassermann, plasma carbon dioxide tension, as well as certain renal functional tests, are usually ordered. In the case of suspected diabetes, a sugar tolerance test is indicated. A daily urinalysis, and even a fractional test on every voided specimen are often justified. In the case of diabetic or uremic coma, blood chemical studies and urinalyses are frequently performed several times a day. In the case of a patient suffering with a toxemia resulting from thyroid overaction, in addition to basic studies, blood chemistry and blood Wassermann, a plasma carbon dioxide tension, a basal metabolic estimation, a sugar tolerance test and frequent urinalyses are indicated. The frequency with which these studies are to be repeated will be largely determined by the individual nature of the case. In cardiac and nephritic patients, blood counting and the chemical analysis of blood and urine, are of course, basically necessary. A study of carbon dioxide tension, of plasma chlorides, of vital capacity, together with careful estimation of urine concentration, dye elimination, water balance and urinary chlorides in nephritic cases, are of great importance.

As has been indicated many of these tests are of a purely elective nature. Few of them can be



set down as strictly urgent. The type and seriousness of cardiac and nephritic damage with their accompanying telltale symptoms direct the physician's attention to the necessity of securing added information by means of these studies. In the case of gastro-intestinal diseases and of hepatic cirrhosis, a complete blood count, a blood urea, sugar and Wassermann are all of considerable importance. Certain renal functional tests can be justified and certainly bromsulphalein and galactose tolerance tests are helpful in hepatic diseases. Likewise in these states the physician rightfully desires knowledge as to the icteric index and the results of the Van den Bergh test as well as to the absence or presence of bile in the stool and urine. Whenever disease of the gallbladder is suspected, cholecystography and frequently gastro-intestinal x-ray studies should be provided.

#### *Interns' Authority Should Be Limited*

It appears proper for the visiting staff of the hospital, therefore, to decide upon two types of laboratory procedures to be permitted in ward cases—studies that are urgent and that should be ordered immediately upon the arrival of the patient at the hospital, and tests that are somewhat elective in their nature and that can await the arrival and request of the visiting physician.

It is impossible to lay down any definite regulations in reference to the type of x-ray work permissible. It can be said, however, that except in emergency surgical cases and rarely in the instance of medical cases, all x-ray studies should be ordered only by the visiting physician or one of his associates. It is not feasible or economical to permit interns to order these studies without supervision.

A great source of waste in the hospital lies in the improper preparation of patients before they are sent to the roentgenologic department. This, perhaps, is oftener the fault of the visiting staff than it is of the intern because of a lack of definiteness in outlining the technique of properly preparing a patient for roentgenologic examination. The average x-ray request sheet, if of chart dimensions, should have plainly printed on the reverse side complete instructions as to this preparation. This would obviate the wasteful exposure of plates which are later not capable of interpretation because the patient had been improperly prepared. Too frequently are repeat x-ray examinations requested when there has been no clinical change in the patient's condition, and when it could hardly be expected that a second study would reveal pathology not detected in the first film. Here, again, it should be stressed that the x-ray is to be employed as a confirmatory spe-

cialty department, and not as one originally and primarily diagnostic. Except in emergencies, no patient should be sent to the x-ray department without a most careful physical examination having been carried out.

The electrocardiographic department is more rarely abused, because the visiting physician is not prompted so frequently to employ this specialty. This is doubtless because often he is not fully informed as to the information he may gain thereby. Basal metabolic studies are seldom needlessly performed, and the waste here is largely that of the operator's time when a patient not requiring this service is sent to this division.

It can be truthfully said that the amount of money that could be saved annually throughout the hospital field by more intelligent and judicious use of the hospital's specialty departments runs into many figures. The best method by which abuse of such services can be prevented is to place the responsibility entirely upon the proper staff committee to prepare a list of permitted routine studies and to limit the authority of unseasoned house physicians in making these requests.

A hospital that permits too great a number of studies per admission is almost as culpable as one that permits too few. The administrator of the hospital who is troubled because of a lack of information as to the practical interpretation of the term "adequate scientific study of the patient" should place the question squarely before the executive committee of the staff, and should require that definite regulations covering this point be drawn up for the approval of the staff as a whole.

## Danger Ahead for Next Generation

Low vitality, susceptibility to disease and longer convalescence, delayed care of physical disabilities among children are conditions directly traceable to the present economic situation, according to a report made public recently by Newton D. Baker, Chairman of the Welfare and Relief Mobilization. The report, compiled by agencies cooperating with the mobilization, contains the testimony of children's institutions, hospital summer camps, nutritionists and public health nurses on the effect of the depression on child health.

Well organized health work over a number of years is reflected in the lowered infant mortality rate which was 62.2 in 1930 in 869 cities of the birth registration area and 61.2 in 1931. These statistics, however, do not show the havoc being wrought by lack of food, clothing, fuel, medical care and recreation. There will undoubtedly be a harvest of tuberculosis and other diseases in the next ten years from what the children today are suffering unless efforts are redoubled to maintain a decent minimum of living and health standards throughout the country, was pointed out by the report.

## Maintenance, Operation and Equipment: Real Economies Result From Practical Buying

By S. T. MARTIN

Assistant Superintendent, Regina General Hospital, Regina, Sask.

THE Regina General Hospital, Regina, Sask., in 1929 began to employ regular business methods in the conduct of its internal affairs, and since that time has been continually working with that purpose in view. Since it is desirable to eliminate waste in purchasing, in distribution and in personnel, and since waste is not permitted in a business organization even in normal times, it is imperative, with economic conditions as they are, that all hospitals operate on an efficient basis.

I shall not attempt to deal with the side of hospital finance having to do with charges or collections from patients, for these matters are more or less out of our control at the moment, or at least they vary according to the location of the hospital and its method of financing. I shall confine my remarks to an explanation of the manner in which purchasing, distribution and similar problems are being met at Regina General Hospital.

Purchasing generally should be done by one person or one central office. Stocks should not be allowed to accumulate, but should be arranged so that immediate needs are always protected, and so that replacements arrive and are reordered in an orderly manner. In other words, follow the trend of the business world and buy from hand to mouth. In these days of rapid transportation and immediate delivery of merchandise there is little necessity to buy for the future, with the resultant outlay of money, warehousing, depreciation by age, dirt and repeated handling, as well as the tendency to consume greater amounts when the supply is abundant. But in all cases see that requirements are protected.

### *Ask for Competitive Bids*

For the last three years we have been in a "buyer's market," so the necessity for looking far ahead in purchasing does not exist. Purchase as much as possible by contract, but ask for competitive bids before awarding a contract.

We contract monthly for all our grocery items, milk, butter, ice cream, printing, bread and similar products. We get competitive prices from all the

wholesale houses in our city each time we buy fresh meats, fruit and vegetables. Inasmuch as we buy these products every other day this procedure takes considerable time, but we have found it highly profitable. We check up on the quality of those items that can be analyzed in our own laboratory, and frequently go out into the open market and buy a loaf of bread from all firms who bid to supply this item. These loaves of bread are analyzed by an independent source, and our purchasing is governed by the tests. There is considerable difference in the quality of bread that is offered at approximately the same price.

### *Don't Overbuy on "Bargains"*

Both the internal and external features of the bread are taken into consideration in the analysis. A loaf of bread that is perfect in every respect will receive a rating of 100 points—thirty points for the external features and seventy points for the internal features. The external features that are taken into consideration in the analysis and the maximum number of points allotted to each are as follows: volume, 10 points; color of crust, 8 points; symmetry of shape, 3 points; character of crust, 3 points; break, or shred, 3 points, and evenness of bake, 3 points. The seventy points apportioned to the internal features are divided as follows: color of crumb, 10 points; texture or feel, 15 points; grain, 10 points; taste, 20 points, and smell, 15 points.

"Rebuy," do not simply "reorder," when it is necessary to replenish your stocks. Buy from the original source of supply if possible. Do not overbuy simply on the inducement of a bargain. Always check up the approximate requirements for a reasonable length of time, say three months, before purchasing any item.

While it is desirable to do as much purchasing locally as possible, this should be done only when it is to the advantage of the hospital. It is advisable to buy only standard makes of any item, so that repair parts will always be available. In order to get the benefit of quantity price when

buying such items as gauze and cotton, when the amount to be consumed is known, it is sometimes necessary to anticipate future needs. Always insert in the contract, however, a clause guaranteeing the hospital protection against either an increase or a decline in price. With regard to food, only the best available products should be purchased.

#### *Biggest Saving Is in Distribution Methods*

At Regina General Hospital every representative who calls at the hospital is granted an interview, as much information may be gained from a representative of a reputable business firm who knows his goods. But in order to be a good buyer a person must always retain a certain "sales resistance" and must buy rather than "be sold." Salesmen are not permitted to go about the hospital seeing department heads, but when necessary the department heads come together in the purchasing office. The department heads make known their wants before interviewing the salesmen.

While good purchasing cannot be overstressed, still it is in distribution that most saving is achieved.

All our supplies are issued from a central storeroom on requisitions made out by the department head or supervisor of the ward. The requisitions are closely scrutinized and checked, if for the nursing service, by the training school office, if for food products, by the dietitian, and for all other departments and items by the assistant superintendent's office. The items on a requisition that can be deleted or reduced in number by careful checking are astounding. In order to eliminate overordering in connection with a number of items, a ration has been set up, based on the daily population of the ward, which has worked satisfactorily.

To check waste in the consumption of an item we devised the following scheme: We took one item and for a three months' period made a close check on all departments using the item. We compared their daily population, the class of patients, the kind of patients, whether surgical or medical, and so on. Then we took two medical public wards, male and female, and compared the quantities used. It is surprising what can be learned in this way. In the small matter of ink, for example, we found that two of our largest wards got along on eight ounces of both blue and red ink a month, yet some of our smaller wards required, or at least thought they required, as much as a quart and a half of each color of ink a month. It was discovered that some supervisors washed out their inkwells each day. This and

other abuses were corrected and for the past two years a maximum quantity of a pint each month for a ward of thirty patients has been set, and everyone has been well supplied.

We purchased a small hand butter cutter and conducted experiments in the dining room of our nurses' home. It was found, after using the cutter over a reasonable period, that waste was eliminated only after the butter had been cut to forty-eight squares to the pound. We adopted a thirty-square to the pound ration for each patient's meal. When the various floors make requisitions for butter from the storeroom, their requisitions are based on this figure. The net result is a saving of thirty-five pounds of butter a day, and every patient receives all the butter he requires, since all that was accomplished was the saving of butter left unused on plates, which must of necessity go into the garbage pail.

The following are some of the items we have been able to ration in this manner: milk, cream, butter, ink, rubbing alcohol, oranges, lemons, tray cloths, cleansing powders, cleaning soap and toilet soap.

We have found that a two and three-quarter-ounce cake of toilet soap meets our needs best, as it will usually last the average patient during his stay in the hospital. No patient is allowed to use a partially used cake of soap. The floor supervisors requisition a new cake of soap for each patient on their respective floors on requisition days. The saving on some wards was as high as twenty-four cakes of soap a week. The used portions of soap are collected from time to time and boiled down for use as enema soap.

#### *Linen Costs Reduced \$7,000 a Year*

Breakages, no matter of what nature, are handled entirely on an exchange basis, and the same applies to worn-out or defective equipment. One day a week is set aside for this purpose, and all such items as breakages, defective hot water bottles, supposedly worn-out brushes and brooms and plugged hypodermic needles are sent to the storeroom, where they are closely scrutinized. Replacement is made if necessary, or the items are returned for further service. Repairs are handled in the same manner. In order to secure a new light bulb, for instance, the broken or defective bulb must be turned in to the storeroom.

Linen was probably our greatest problem—we never had enough. An investigation showed that the system of having the floor supervisor requisition the amount of linen she thought she would need had many defects. It allowed the insistent nurse to receive more than her requirements; it permitted hoarding; special nurses hid linen, and



there were many other abuses that are familiar to all hospital authorities. We surveyed the hospital's linen requirements, and compiled a complement of linen for a private, a semiprivate and a public ward bed. It was a simple matter to multiply this by the number of beds in each ward and thus determine the complement for each ward. In each case we allow enough linen to meet the needs of Saturday, Sunday and Monday.

The soiled linen is sent to the laundry in bags that are marked with the ward number. The linen is counted and listed, and the same amount as received is returned to the ward. An inventory is taken at the end of each month, and any shortage or overage in the ward's supply is adjusted.

This system has worked extremely well. We no longer hear complaints of a shortage of linen, and in the first six months that the system was in operation our laundry work was reduced by 112,000 pieces. It was found necessary, however, to provide more cupboard space on the various floors. These cupboards are kept locked and the floor supervisor is the only one permitted to issue linen. By standardizing draperies and certain clothing, by having all torn linen returned direct from the laundry to the sewing rooms and by putting the previously mentioned economies into effect, we have reduced our linen costs \$7,000 a year.

#### *Laundry Expense Much Lower*

Other economy measures that have shown excellent returns are as follows:

Hypodermic needles have been standardized. We formerly carried twenty-two sizes, and we now carry five sizes.

A high grade of pipe is being used in place of ordinary pipe, and this has resulted in a saving in wages and material, as well as preventing damage from leaking pipes.

Razor blades are issued on an exchange basis and a blade sharpener is used. Our purchases on this item are now only one-fifth of our former purchases.

By softening our water supply, we not only have soft water for our boilers, with the resultant saving in repeated overhaul of the boilers, but the expense of laundry supplies has been reduced \$2,000 a year. The life of our linens has been increased, and their appearance improved.

A saving of 50 per cent has been made by having a complement of china for all wards and by taking a monthly inventory, with a rule that all breakages must be returned for replacement.

Our printing costs have been reduced 25 per cent by checking the number of forms purchased against the number actually used each month.

An occasional check-up on used dressings, or the dressings found unused in the bed linen at the laundry, has given excellent results.

Government inspected No. 1 quality meats and choice quality canned goods are always used. Yet in 1931, as compared with 1928, when we had exactly the same number of patient days, our food cost was reduced from \$83,553 to \$59,324. While it is true that many food commodities have dropped in price, we believe that we have improved and added to our menus and to our dietary service far more in value than is represented by the decline in food prices.

#### *Big Saving Made in Cleaning Costs*

We have eliminated the necessity for buying scratch pads by holding discarded office reports together with fasteners. The saving on printed forms, which were frequently used as scratch paper, is also considerable.

The back of the original letter is used for the carbon copy in replying to communications. This saves a second sheet and space in filing, and the letter and reply are always together.

We were able to replace our male cleaners with maids, except for a skeleton crew, by purchasing an electric scrubber and polisher at a cost of about \$300. This resulted in a saving of \$3,072 in wages alone for our cleaning department in the year 1931. By purchasing liquid wax, which can be applied with a spray, we improved our floors, saved time and reduced our cost on wax by over 50 per cent.

Paper tray cloths were adopted and now each meal is served on a clean, attractive tray cloth. The cost of this cloth per tray per day is less than the cost of the daily laundering of one linen tray cloth.

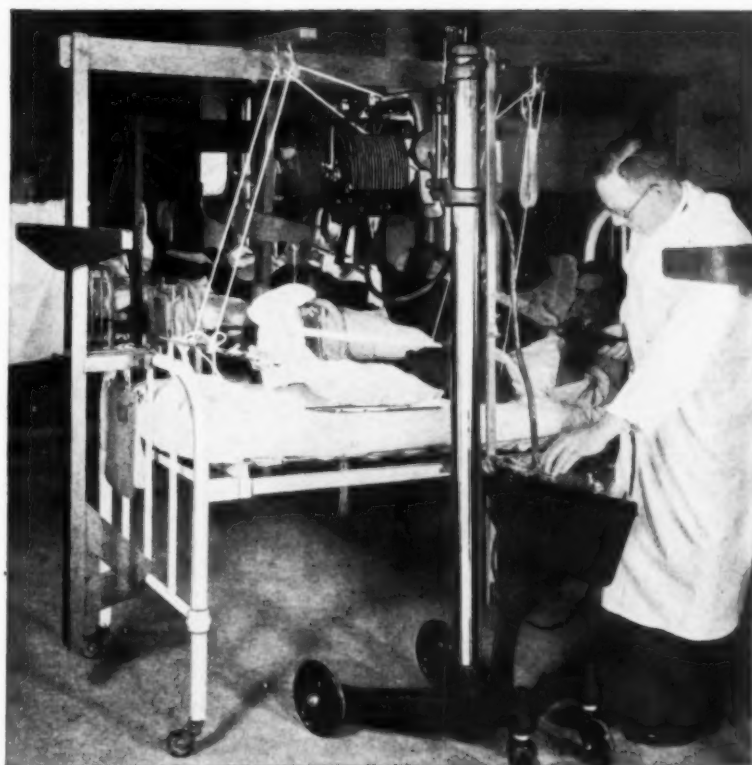
By rearranging working conditions in our dietary department, salaries show a reduction of \$6,250.

A saving of a ton and a half of coal a day was effected by turning off the steam into the laundry hot water supply tanks as soon as the laundry was closed for the day. By turning the exhaust steam into the hot water supply tanks, we are able to raise the water temperature from 40° F. to 110° F. and up at no extra cost.

By rearranging our laundry service so that the minimum number of employees were fully occupied during the full working day, instead of having two or three peak load days with extra help needed, we effected a saving in salaries of \$2,100 in one year.

In employing members of our lay staff personnel we endeavor to place their employment on the same basis as similar employment in the busi-

*"The hospital roentgenologist who is expected to submit his x-ray interpretations based on radiographs which, due to inadequate x-ray equipment, leave room for doubt, is seriously handicapped, while an injustice is imposed on the patient."*



*Photo courtesy Cook County Hospital, Chicago*

## Is your roentgenologist at a disadvantage in diagnosing bedside radiographs?

**B**EDSIDE radiography in the hospital is generally considered as limited to films of a more or less compromising diagnostic value, due to the very definite restrictions imposed by the so-called bedside type x-ray units available up to the present.

With the advent of the Victor Model "D" Oil Immersed Shock Proof X-Ray Unit, however, bedside radiography takes on an entirely new meaning. Roentgenologists acclaim it an auxiliary unit practically indispensable to the regular x-ray service of the modern hospital.

With the x-ray tube and the high tension transformer both immersed in oil and sealed in a single container, the model "D" is rendered 100% electrically safe against the possibility of contacting the high tension current. Thus the usual operating restrictions are removed and the x-ray tube may be positioned according to the diagnostic view desired, without regard to proximity of apparatus to the patient, operator, metal parts of bed, etc. The extremely small focal spot

of the specially designed Coolidge tube insures the fine radiographic detail so essential to x-ray interpretation.

The Model "D" serves also as a companion unit to Dr. Hawley's New Orthopedic Table, for making radiographs in cases of fracture, and for reducing fractures under the fluoroscope—without the necessity of transferring the patient from the table.

Every hospital superintendent and roentgenologist will be interested in the radically new principles here introduced, as well as the important advantages this mobile x-ray unit adds to the diagnostic and surgical services.

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Join us in the General Electric program broadcast every Sunday evening over a nationwide N. B. C. network

ness world. In this way we were able to eliminate over 1,000 meals a month to nonresident staff. It seems to be an inherited idea that meals in a hospital are of small value, and therefore should be free to all. The raw food cost is not the only cost in connection with serving meals. Yet the elimination of these 1,000 meals, at a raw food cost of \$125 a month, and other economies effected in the dietary department, made it possible to eliminate two of the staff in connection with food preparation alone.

#### *Cafeteria Service Adopted in Dining Rooms*

It is advisable to pay the lay staff members wages commensurate with the service rendered, to give them all the privileges a business concern with like employment would give and to expect in return the same kind of service from the employees that they would be required to give if employed by a business concern.

With the sole idea in mind of serving meals more quickly, of offering a wider choice of food and of serving meals hotter, we converted the dining room of the nurses' home into a cafeteria at a small cost. The results were surprising. Two members of the staff were eliminated and food waste was considerably reduced, but what is equally important, the nurses are better satisfied with the new arrangement. The results in this instance were so excellent that we put cafeteria service into effect in our lay staff dining room, where the results are even better than in the nurses' home. In neither case was the layout adapted to a cafeteria, yet the necessary changes were made at a nominal cost.

We have eliminated "jobs for bosses." Each departmental head does his or her share of work. The chief engineer, for example, wears a pair of overalls, and does actual repair work. The laundry foreman assists the washman; the housekeeper works in the sewing room; the housekeeper in the nurses' home does her share of work. The foreman cleaner, besides supervising the floor maids, puts in a busy day washing walls, cleaning corridors, putting on or taking off storm windows and performing other similar tasks.

The department heads meet monthly with the superintendent of the hospital to discuss mutual problems. That our staff is loyal and satisfied is illustrated by the fact that out of a lay staff of about 130 persons, there were only two resignations and one dismissal last year.

Written applications are required of all persons seeking staff positions. During the past four years practically all replacements of maids and other unskilled workers have been made from persons who are indebted to the hospital for serv-

ices received. At the present time more than 20 per cent of the members of our staff are persons who are paying off hospital accounts in this manner.

Many similar savings have been made, but I think that a sufficient number have been mentioned to prove that a survey into the internal workings of a hospital will produce substantial dividends.

That the application of these principles in the Regina General Hospital has been well worth while is indicated by a comparison of the figures for 1928 and for 1931, two years with the same number of patient days. During this period we have built a new and much larger nurses' residence, at a cost of \$350,000; a new power house and laundry, at a cost of \$185,000; we have turned the nurses' old residence into hospital wards, and have added several new services, such as a psychopathic clinic and a cancer clinic. Despite the fact that all of these changes create extra maintenance cost, our operating expenditures, other than salaries, showed a saving in 1931 of about \$60,000, in comparison with 1928. We are operating today at a progressive decline in our costs of from \$30,000 to \$35,000 each year.

## A Window Ventilator that Excludes Noise

By CARL P. WRIGHT, JR.  
Grasslands Hospital, Valhalla, N. Y.

The most common method of ventilation is the open window which allows street noise to enter the room as well as fresh air. A ventilator that permits fresh air to enter the room and, at the same time, excludes outside noise, has recently been developed.

The noise eliminator is nonmechanical, and has no motor or other moving parts to get out of order, yet it ensures better air circulation than does an open window. This result is obtained through an engineering design which obviates the need of a mechanical blower. The muffling of noise and the flow of air are made possible by provision for both acoustical and ventilation control. The result obtained is essentially that of a closed window, from the standpoint of acoustics, and of an open window from the standpoint of ventilation, with the added feature that air circulation is improved. Drafts are eliminated and the force and amount of air are readily controlled.

The sound excluder may be lifted from the window, leaving the window space as fully open as though the installation had not been made.



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It is more than coincidence that the foremost architects avail themselves most fully of the food service engineering facilities of The John Van Range Company for their most important institutions. The Springfield Hospital is a typical instance.

Kitchens and dining rooms occupy a special building, three stories high. All food used in the hospital is prepared on the first floor where kitchens connect directly with store rooms, refrigerators and dish washing apparatus.

Cafeterias for nurses and help share the upper

floors with the service dining rooms for superintendent and staff. The diet kitchen and the food service to patients are outstanding features of this great hospital.

Architects Stevens and Lee of Boston, and their consultant, Charles F. Neegaard, used the services of The John Van Range Company's engineering department to plan and detail this world-famous food service department. Responsibility for the manufacture and installation of the equipment was lodged entirely with the Van organization.



VAN special Stainless Steel and Nickel Bronze Stock Kettles contribute toward making the kitchen "as sanitary as the surgery."

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# Sterilization and Cooling of Solutions

By W. B. UNDERWOOD

Erie, Pa.

THE sterilization and cooling of liquids in a pressure steam sterilizer involve performance radically different from that used in the sterilization and drying of dressings.

Dressings require permeation of steam through a mass of porous materials, and for drying the process can and should be as rapid as possible. But solutions are not permeated by steam; instead, they must absorb heat in a relatively slow process, from the surrounding steam. For cooling, the process must be slow and gradual or a considerable portion of the solution will be wasted.

Just how important these details of heating and cooling are can best be illustrated by temperature curves. The accompanying graphs, representing results secured by maintenance of pressure at 15 and 20 pounds, respectively, show temperatures indicated by the pressure gauge and the actual temperatures of the solution in an unusually efficient machine, during the heating or sterilizing process, and a proper cooling period. The dotted curves show the temperatures attained in an inefficient machine from which air has been improperly expelled. The average sterilizer will produce a curve which will fall in the shaded area.

In each of the tests from which these curves were secured, a flask of 2,000 cc. capacity was filled to the neck with tap water at 70° F. Temperatures were measured with an accurate potentiometer having its thermocouple submerged in the water in the flask.

## *Wrong Impressions on Solution Sterilization*

It was shown in other tests that 1,000 cc. flasks required within two to three minutes as much time for sterilization as 2,000 cc. flasks.

Because the gauge indicates the temperature of pure steam at various pressures, the operator, as a rule, believes that as soon as the gauge shows sterilizing pressure the solution must have attained a corresponding temperature. This is far from the truth, as the accompanying curves indicate. A common sterilizing procedure based upon this wrong assumption is maintenance of 15 pounds pressure for fifteen minutes.

Refer now to the temperature curve from the test in which 15 pounds pressure was maintained (Fig. 2). In fifteen minutes in this unusually effective machine, the temperature rose only to 234° F. on a sharply rising curve. In ten minutes the temperature had advanced only to 203° F. The average temperature for the last five minutes was only 219° F.

Now examine the curve from the test in which

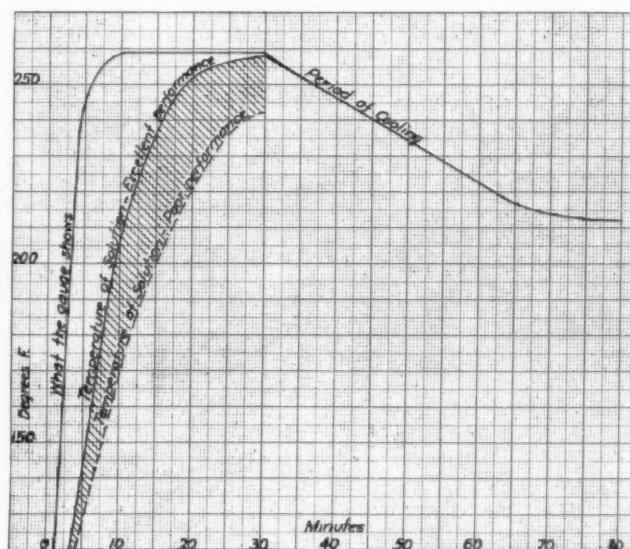


Fig. 1. This graph shows the results secured from the test in which 20 pounds pressure was maintained.

20 pounds pressure was maintained (Fig 1). The temperatures at intervals of ten and fifteen minutes are considerably higher than when 15 pounds pressure was maintained, but they fall short of the range at which surgical sterilization should be attempted.

When this accurate sterilizer is operated for thirty minutes at 15 pounds pressure, the temperature in the flask has barely reached 250° F. Maintenance for thirty minutes at 20 pounds pressure shows a temperature considerably above 250° F. for eleven minutes.

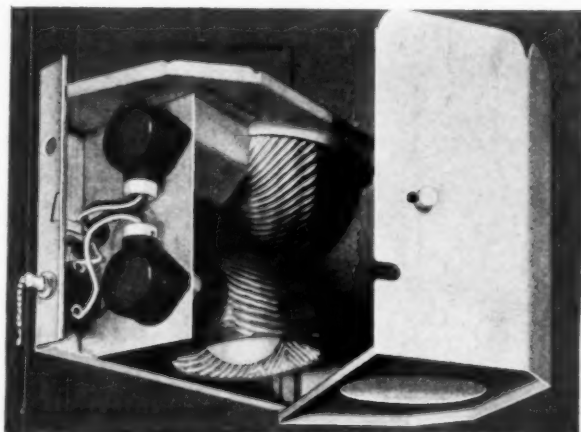
The period of thirty minutes at 15 pounds pressure is without very much doubt adequate with this highly efficient sterilizer, but maintenance of 20 pounds pressure for thirty minutes includes a

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considerable factor of safety. The average machine, however, will be less accurate. The ultimate temperatures attained will be lower and the time required for attaining these reduced temperatures will be considerably greater. This factor of efficiency in the machine cannot be ignored. In everyday work the operator has no means for determining temperatures in solutions; she can only use her best judgment in operating the sterilizer skillfully. The curve of performance in the average

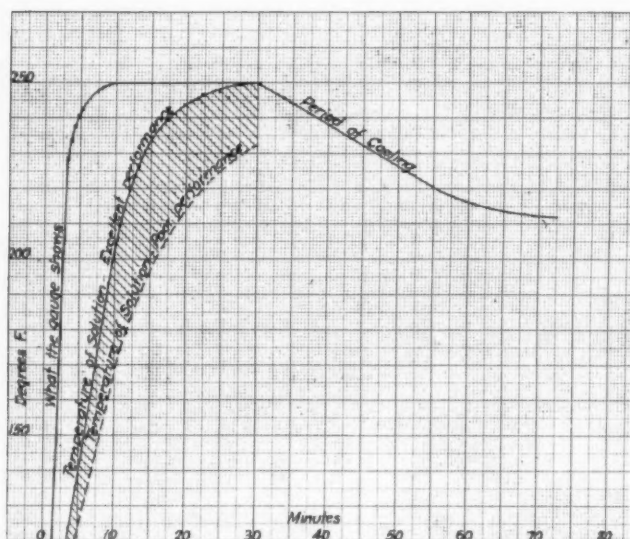


Fig. 2. The results secured from the test in which 15 pounds pressure was maintained are shown in this graph.

machine will usually fall somewhere in the shaded area because air elimination in the ordinary machine will rarely exceed 80 per cent.

In my opinion, salt solution sterilization requires an exposure period of thirty minutes at 18-20 pounds pressure. It is not safe to attempt sterilization at 15 pounds pressure unless the period of exposure is continued for approximately forty minutes. The safety factor operating for thirty minutes at 18-20 pounds pressure will be none too great.

#### *Wastage Does Not Occur in Sterilization*

There exists an erroneous impression that loss of solution occurs during the actual sterilizing period, because of the pressure and corresponding temperature attained. For this reason attempts are frequently made to accomplish the work at lower pressures. Contrary to this popular belief, solutions never boil during sterilization, because the pressure maintained in the chamber is always greater than that at which ebullition can occur. Increasing the pressure increases the boiling point in the sterilizer just as increasing atmospheric pressure increases the boiling point. For example, water boils in Denver, the mile high city, where

the atmospheric pressure is low, at 206° F. and at sea level where the atmospheric pressure is high, at 212° F.

It is in the process of cooling that the loss of solution occurs. A great deal of heat is stored in the solution during sterilization. The liquid has been slow in absorbing its heat and it will be correspondingly slow in losing that heat. Any attempt to hasten the cooling process will always result in violent ebullition. At the close of the exposure period the temperature of the liquid is at or near 250° F. If the pressure is suddenly exhausted, the solution will boil vigorously and this will continue until the temperature has been reduced to the atmospheric boiling point, or slightly lower. This boiling of solutions in cooling is the sole cause of saturated stoppers, blown stoppers and wastage of a considerable portion of the solution into the sterilizing chamber, where it can do a great deal of harm, not to mention the change in character of the solution that is caused as a result of excessive evaporation.

#### *Salt Solutions Harm Sterilizer*

The harmful action of salt solution spilled in the sterilizer can be enormous. Salt attacks even copper, frequently causing corrosion which results in collapse of the sterilizer within a few years. It immediately attacks steel and has been known to practically ruin large expensive sterilizers of the disinfectant type within two or three years. It also corrodes the delicate sensitive parts of the drainage system and is the direct cause of serious difficulties which interfere with or completely interrupt the elimination of air.

#### *The Correct Method of Cooling*

There is only one way to avoid these difficulties. Following the sterilization of solutions of all kinds, the valve which controls the steam from the jacket to the sterilizing chamber should be left open exactly as when sterilizing, the heat should be turned off and the entire sterilizer should be permitted to cool down slowly until all pressure has been exhausted. In this manner only can violent boiling of the liquid be avoided. If this method is followed there will be no saturated or blown stoppers, there will be no wastage of solution into the sterilizer and there will be no appreciable evaporation of the solution.

The cooling process is clearly shown on the temperature curves. A period of approximately fifty minutes is necessary in the average sterilizer for proper cooling after sterilization is completed. This approximate period of time must be allowed with any sterilizer or the technique will be found lacking.

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and the  
doctor

When patients beg, frown and flatter for a cup of forbidden coffee . . . try this:

Ask the doctor about Kellogg's Kaffee-Hag Coffee . . . 97% free of caffeine. He will probably agree that it can be given in most cases of heart, stomach, kidney and nervous conditions, where caffeine is outlawed. He should welcome your suggestion . . . for he well knows the evils that abstention can

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And the patient need never know that his steaming, fragrant coffee is caffeine-free. An improved Kaffee-Hag process adds new zest to this flavorful blend of Brazilian and Colombian coffees. Delicious coffee! Serve it strong and often, without running caffeine risks. A good way to follow "no caffeine" orders without putting patients out of sorts.



Kellogg's Kaffee-Hag Coffee  
is accepted by the American Medical Association.  
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## DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by ANNA E. BOLLER, Central Free Dispensary at Rush Medical College, Chicago

### Running the Dietary Department on a Five-Unit Plan

By GERTRUDE I. THOMAS

Director of Dietetics, University of Minnesota Hospital, Minneapolis

THE development of the dietary department at the University of Minnesota Hospital, Minneapolis, over the last five years has resulted in a five-unit arrangement, with five graduate dietitians. The authority is centralized in the administrative office of the director of dietetics, where problems of organization and operation are met; the teaching program is outlined; the budgeting of foodstuffs is done; the members of the per-

sonnel are selected and supervised; the menus are made, and the food ordered.

There is a diet laboratory from which are sent out, on an average, sixty-five special diets daily. In this department the student nurses and student dietitians receive class work and practical experience, as they modify the house menu and adapt it to suit the individual needs, tastes and temperaments of the patients. There is a milk laboratory



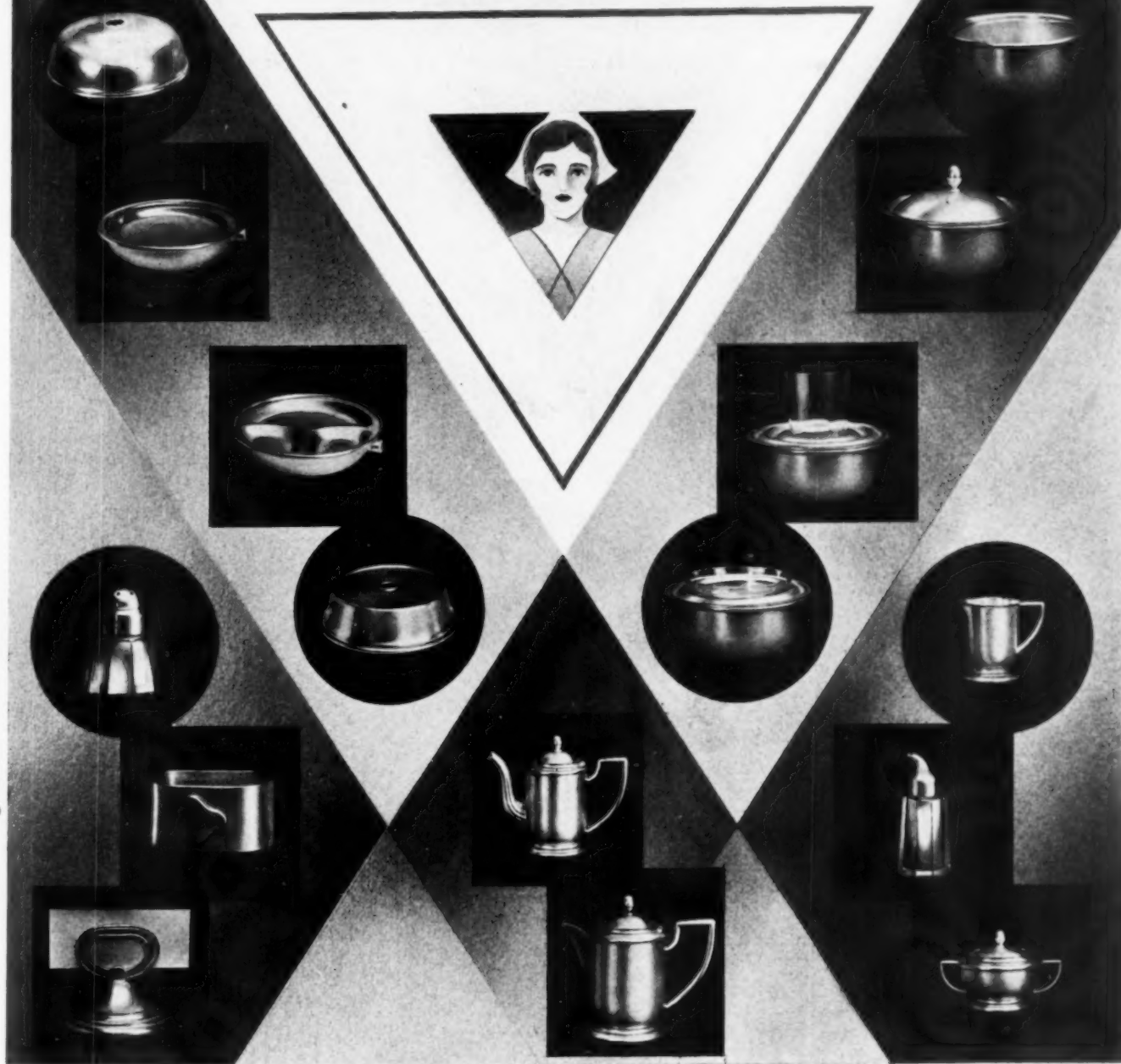
*In the milk laboratory supervised work is given students in the preparation of milk formulas and artificial feeding for infants.*



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where the milk formulas and experimental diets for infants are prepared, and where follow-up work on routine pediatric diets is done.

In the nutrition clinic there is an opportunity for teaching the patients who come to the clinic and also patients who are hospitalized. The outpatients are followed from the hospital throughout the state by mailed directions for their dietary care. Within the hospital, the ambulatory patients are brought down to the clinic for instruction but those who are bedridden are taught on the ward.

The fifth division of the work includes the dining room and kitchen activities; large quantity cookery; checking of supplies; the preparation and distribution of foodstuffs for the general diets, and the serving of meals to the hospital personnel.

The offices, laboratories and kitchens are well arranged as the wing in which they are located is comparatively new. Many of the ideas controlling modern hospital construction have been put into use and consideration has been given to light, ventilation, sufficient floor space, arrangement of equipment, adequate accessory rooms and refrigeration. Modern appliances and labor saving devices of many kinds are in evidence.

Attention has been given also to the esthetic features, such as wall coloring and the use of softly tinted tile. The use of white or gray, formerly so characteristic of hospitals, has been abandoned. Hospitals are now attractively decorated and it has been proved that it is as simple to keep clean a colored tile wall as a white one.

In the special diet laboratory the outstanding feature is the ease with which a large number of modified diets are distributed. Four methods are used, according to the type of service best suited

to the needs of the patient. The greatest number of special diets are transported by placing the filled plates in racks that fit into the wells of the food carts that go up from the general kitchen with the house diet.

In many cases it is not necessary to send up an entirely different meal, and the modification may be achieved by supplying some specified item. These substitutions often do not require an entire plate, and they may be of such consistency that they could not be carried in this way. Pint sized metal containers with tightly fitting tops are provided for this type

of service. If there is an empty well in the cart, the containers, which have been previously heated in a bain-marie, are fitted into the well, the lid of the well is clamped down and the food is kept warm.

Weighed trays are always a problem. The most satisfactory way to transport weighed diets from the diet laboratory would be in heated carts, but it can be accomplished, as it has been here, by putting the food in heated dishes after it has been weighed, covering it as well as possible and getting it to the patient in minimum time. The ambulatory pa-



*Adequate accessory rooms and modern appliances are features of the department.*

tients who are on weighed diets have a small dining room near the diet laboratory where they come for their meals. In this case there is little delay in getting the food to the patients, and they enjoy their excursion to this dining room. There is additional educational value in the fact that patients meet others who have similar dietary problems.

The diet laboratory offers a good field for teaching. Morning circles are held twice a week at which the special diets in the house are surveyed. The student nurses and student dietitians write case histories while they are rotating through the



## “You’ll like Ry-Krisp. It’s a delicious food—as well as an effective aid to laxation”

**R**Y-KRISP Whole Rye Wafers are doubly valuable in diets planned to assist laxation. Made simply of flaked whole rye, water and a dash of salt—they provide (a) a high percentage of bran, for increasing secretion and peristalsis, (b) high pentosan and crude fiber content—both natural aids in producing normal bowel action. Double baking reduces the moisture content of Ry-Krisp Wafers to a minimum—gives them an exceedingly high absorbing power and makes them particularly effective as a bran carrier.

Because they taste so good, Ry-Krisp Whole Rye Wafers are as welcome as they are effective. They’ve a tempting crispness—an unusual whole rye flavor that adds interest to a wide variety of foods

at breakfast, lunch, dinner or between meals.

To assist you in planning special diets, our Laboratory Research Report on Ry-Krisp Whole Rye Wafers, and samples of the product for testing, will be forwarded to you without cost. Just fill in the coupon or attach it to your prescription blank or letterhead.

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*Instead of using heated carts for transporting food from the diet laboratory, the food is placed in heated dishes, after it has been weighed, and is then dispatched as quickly as possible to the patient.*

various services and these are kept in their personal files. The practical work done in the diet laboratory includes nourishments for the patients and also for the staff of the operating room; cooking of food for those who require some adjustment of diet rather than a completely altered tray; consideration for the likes and dislikes of the patients, and catering up to a reasonable degree. The student preparing the diet is expected to make a contact with the patient and to be familiar with food preferences.

#### *Nutrition Clinic Has Complete Teaching Facilities*

In the milk laboratory, student nurses, postgraduate nurses and student dietitians are taught. They are given closely supervised work in the preparation of milk formulas and artificial feeding for infants. Formulas for twenty-four-hour periods are mixed and divided and bottled and kept in the refrigerator until the hour for heating and feeding. For the infant of four months or older, more concentrated foods are added and in addition to the

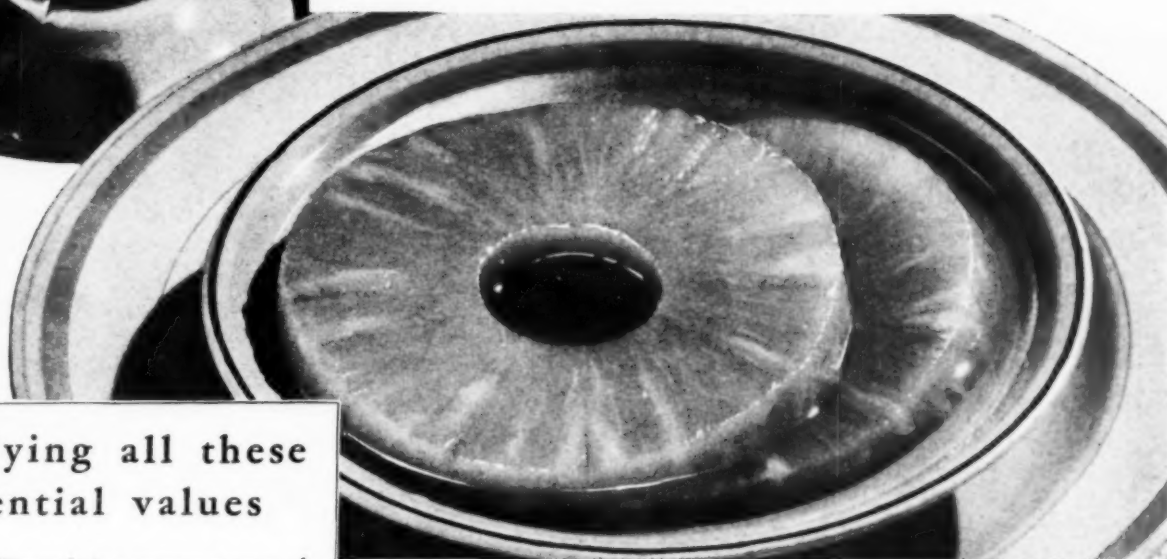
routine infant feeding, diets for research are carefully weighed as prescribed, for experimental work on fevers, osteomalacia, diabetes, epilepsy and nephrosis.

The most arresting features of the nutrition clinic are the facilities for the instruction of patients, relatives of patients, nurses, postgraduate nurses, student dietitians, medical clerks and medical students. General clinics are held daily and clinics for specified disturbances, such as diabetes or epilepsy, are scheduled at definite times. There is close cooperation between this department and the social service workers, and diets are here calculated with special reference to the family budget and food costs.

The dining room and kitchen service is made more attractive by excellent location and a delightful view of the Mississippi, which sweeps in a crescent around the west wing of the hospital. The walls of the dining room are tinted with color of sufficient warmth to be pleasing during the long months of a Minnesota winter. The room is fur-



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**TWO SLICES**  
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1. Canned Pineapple is a generous source of vitamins A, B, and C.

2. It furnishes the minerals that safeguard against nutritional anemia—iron, copper and manganese. And it supplies notable amounts of calcium and phosphorus.

3. It helps effectively to prevent acidosis by contributing to the normal alkalinity of the blood.

4. Canned Pineapple speeds digestion in the stomach of foods with which it is eaten.

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For daily use, *Canned Pineapple* is recommended. Canning processes cause a beneficial change of dietetic importance.

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ONE OF THE most delicious, most economical fruits you serve. And as revealed by recent studies, one of the most valuable, too—for dietetic reasons.

Canned Pineapple has been shown to contain more essential nutritional values, and to meet more known dietetic needs, than any other fruit which has undergone like studies.

Notice these many newly discovered values, in the panel at left. Realize that they are *combined* in this one fruit. Based upon soundly established tests on human subjects—these findings justify the new im-

portance of Canned Pineapple for daily use.

It is adaptable to obesity, high-caloric, anti-anemic, anti-constipation, as well as other restricted diets. These, besides its general use in full diets and on children's trays.

And, in whatever way you serve Canned Pineapple, the cost is always low. Particularly in the forms pictured here... each four cents or less.

That is why—in addition to the dietetic reasons—you can serve the fruit in a portion of two slices, or a Pineapple Cup of crushed or tidbits, *at least once a day*. Frequently, too, in salads and with meats.

## ORGANIZATION OF DIETARY DEPARTMENT, 1927-32

<i>Department</i>	<i>Organized</i>	<i>Date</i>	<i>Capacity</i>
<i>Special Diet Laboratory</i>			
Special and modified diets planned, prepared and distributed. Instruction of student nurses, student dietitians and patients in the principles of nutrition.	Reorganized; assistant employed	1927	70 trays
<i>Dining Room and Kitchen Service</i>			
This has to do with the care and distribution of food and its service. It also includes the departmental housekeeping. Boys are employed to serve as waiters during the rush hours in exchange for their meals.	Reorganized; supervisor employed	1928	1,800 meals served on a daily average
<i>Milk Laboratory</i>			
Instruction in the preparation of formulas; research feedings; pediatric feeding for student and postgraduate nurses, student dietitians and medical clerks.	Organized; assistant dietitian employed	1929	20 formulas; 5 experimental diets
<i>Nutrition Clinic</i>			
Teaching of patients, relatives of patients, student dietitians, medical students and clerks; follow-up work throughout the state by mail, and working out of food plans and budgets for social service cases.	Organized; assistant dietitian employed	1930	Varies according to the demands

nished with tables that seat four students, thereby making it possible for small groups of nurses with congenial interests to group themselves together at mealtimes.

There is cafeteria service for breakfast, but waiters are provided for the noon and evening meals. University men students exchange three hours of work for three meals a day, and this group, at a minimum cost, offers a superior type of service. It also makes it possible for those who find it difficult to finance a university education to defray a part of their expenses. It brings about an actual saving in the department of \$230 a month, and increases the number of employees on duty during the rush hours when the food is being distributed and served.

Noise is eliminated as far as possible in the

dining room by the use of composition material for table tops, which obviates to some extent the inevitable clatter of silver and china. Rubber tipped chairs are used. Long window curtains have been found to absorb some of the noise of conversation and service. The dishes are carried away from the dining room and put on carts on an elevator reserved for that purpose. They are stacked and washed in a room below.

The meals are planned according to accepted standards for caloric requirements and a variety of food principles. The proportion of the budget allowed for special commodities conforms also to approved regulations. The student teaching program covers 77 hours, as follows: introduction to nutrition, 11 hours; nutrition, 11 hours; food preparation, 44 hours; diet in disease, 11 hours.

## Separate Board for Nursing Schools, Says Miss Wheeler

Every school of nursing should have a committee or board interested primarily in its welfare, thinks Claribel A. Wheeler, secretary, National League of Nursing Education. The school committee, she believes, should be made up of the following persons: the hospital superintendent and the principal of the school, ex officio; one or two members of the board of trustees; a member of the medical staff; a representative of the alumnae of the school; an educator, active in his field, and other lay per-

sons prominent in community affairs. This committee could decide school policies and could raise funds other than those allocated by the hospital.

Dorothy Blagdon, a member of the present committee of the Bellevue Hospital School of Nursing, New York City, states: "I am convinced that not enough lay opinion is expressed in connection with nursing. It is basic to our social welfare."

Mrs. Blagdon is right, Miss Wheeler declares. Those who represent the community that is served have not been vocal enough. The whole system of adequately preparing nurses to meet present day needs has suffered because of the lack of interest and support from the lay public.



## ***There is No Need for Expensive Forms of Baby Food***

IN AN address before the American Dietetic Association in St. Louis (and reprinted in the Journal of the American Dietetic Association) Dr. McKim Marriott states:

"In applying the principles mentioned to the practical feeding of infants, a satisfactory formula for use during the first year is prepared by adding 3 ounces of sugar to one quart of milk. This provides the proper proportion between sugar and milk. The most satisfactory form of sugar, as well as the cheapest, is ordinary Karo corn syrup. This is the commercial food product

obtainable in grocery stores. It is a mixture of dextrin and maltose with some glucose and a little cane sugar. It is prepared by the hydrolysis of starch. The dextrin is not readily fermented by intestinal bacteria and the maltose and glucose are quickly absorbed. This form of sugar can be fed safely in somewhat larger amounts than cane sugar. It is at least as good as many of the prepared malt baby foods and far cheaper."

Every year brings a wider acceptance of Karo Syrup as an ideal food for infants—both in acid milk and whole milk formulas.

### **FREE TO PHYSICIANS!**

The makers of Karo take pleasure in presenting to the Medical Profession, pocket-size books of prescription blanks for infant feeding formulas. These may be used for any type of formula which the physician desires.

General instructions applicable to the preparation of any form of feeding are printed on the back of each blank. Merely write Corn Products Refining Company, 17 Battery Place, New York City and request the prescription-blank pads you desire.



## NEWS OF THE MONTH

## Group Hospitalization Featured at A. M. A. Congress

**M**EDICAL economics and the related subject of group hospitalization and insurance were the topics of major interest to hospital administrators discussed at the two-day session of the twenty-ninth annual congress on medical education and licensure held in Chicago, February 13 and 14.

Dr. Ray Lyman Wilbur, secretary of the interior, was the presiding officer at the congress which was held under the auspices of the council on medical education and hospitals of the American Medical Association. Participating in the congress were the Federation of State Medical Boards of the United States, the American Conference on Hospital Service and the council on physical therapy of the American Medical Association. Physicians and surgeons, medical educators and hospital administrators from all over the United States gathered in large numbers to take part in the sessions.

### *A. H. A. Trustees Approve Principle of Insurance*

Noteworthy among the suggestions made in the discussion on group hospitalization were certain tentative standards formulated and presented by Dr. Nathaniel W. Faxon, director, Strong Memorial Hospital, Rochester, N. Y., president-elect of the American Hospital Association. They were as follows:

1. In any plan for group insurance the rights of three groups must be considered—the public, the hospitals, the doctors.

2. A cooperative not a competitive plan must be adopted, allowing to the insured person free choice of hospital and doctor.

3. Adequate medical care for the patient must be the objective and commercial interests must have no bearing on the plan.

4. Group rather than individual insurance must be the practice, so that the scheme may be on a sound basis.

5. A group insurance plan should be carried out by an organization distinct from the hospital concerned, having in its ranks representatives from the hospital, the medical profession, social agencies and the public.

6. Should legislative measures be contemplated to meet the marked demand and desire for some form of hospital insurance, an effort should be made to benefit by the experience of European countries in this matter, where in some instances legislation was enacted that had been opposed by the doctors and the result has been inadequate medical service.

Doctor Faxon stated that the board of trustees of the American Hospital Association at a meeting held February 13 adopted the following resolution:

"RESOLVED, That the board of trustees of the American Hospital Association approves the principle of hospital

insurance as a practicable solution of the distribution of the costs of hospital care which would relieve from financial embarrassment and even from disaster in the emergency of sickness those who are in receipt of limited incomes; the trustees therefore refer this subject to the council on community relations and administrative practice for study and recommendations."

Dr. Lewellys F. Barker, Johns Hopkins University school of medicine, Baltimore, outlined the principal features of the report of the Committee on Costs of Medical Care, of which he is a member. According to Doctor Barker those who favor the majority report believe that the cost of medical care can be distributed so as to relieve individuals of hardship. The minority report, he said, points to examples of such service in which many abuses have appeared.

Commenting on these two points of view, Doctor Barker expressed the opinion that the organization of medical practice and the distribution of medical costs seem certain to undergo some changes. He believes, therefore, that physicians should attempt to direct those changes along routes that appear least objectionable. He thought American physicians could profit by the mistakes made in Europe and by thoughtful control and evaluation of experiments could discover what place, if any, health insurance ought to occupy in American health programs.

Doctor Barker considered that the work of the committee and the widespread discussion of its report would prove helpful in reaching decisions as to the best methods of providing adequate medical care at costs within the reach of the people.

### *Discusses Prepayment Plans for Hospital Care*

Rev. Alphonse M. Schwitalla, S.J., dean, St. Louis University school of medicine, gave a masterly analysis of the basic considerations in the majority and minority reports and expressed the view that the greatest service of the majority report was that it had laid before the public a vast amount of valuable and hitherto inaccessible information relating to medical and hospital care, while the greatest service of the minority report was the restating and re-emphasizing of the principles of medicine.

Prepayment plans for hospital care were discussed by Dr. R. G. Leland, bureau of medical economics, American Medical Association. Doctor Leland declared such plans to be the product of the financial pressure on hospitals brought about by present economic conditions. With few exceptions, he said, "mass production schemes" for hospital care are being promoted by commercial organizations which have seized on the portion of medical care that is easiest to sell and are endeavoring to create a market from which a considerable profit will accrue to the promoter.

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## NEWS OF THE MONTH (Cont'd)

Doctor Leland analyzed in some detail the merits and defects of the plans. As merits he listed: regular financial support for the hospital; payment for hospital care for many persons who might otherwise be objects of charity; a fairly high grade of care, if the hospital maintains its standard of service, and the establishment of a basis for accurate actuarial calculations. Defects, present and prospective, he found to be numerous.

Among those who took part in discussion of these papers were: Dr. J. H. J. Upham, Columbus, Ohio; Michael M. Davis, Julius Rosenwald Fund, Chicago; Doctor Faxon, and Dr. Morris Fishbein, editor, *Journal of the American Medical Association*, Chicago.

*Chicago Group Insurance Plan*

The subject of hospital economics was again featured at the session of the American Conference on Hospital Service held Tuesday evening. Doctor Fishbein and Dr. Herman Smith, superintendent, Michael Reese Hospital, Chicago, were the scheduled speakers. The session closed with a question box conducted by Dr. R. G. Leland, bureau of medical economics, American Medical Association.

Doctor Fishbein deplored the highly commercialized, unsound and unethical group hospitalization activities that have sprung up in every part of the United States, but stated that the American Medical Association is not and has not been opposed to any hospitalization plan provided that it would not interfere with the relation of the patient and physician and would not violate medical ethics.

Doctor Smith then outlined the Chicago plan of group hospitalization under which for the payment of approximately \$10 a year employed individuals in groups could obtain hospitalization in any of the member hospitals for a period not to exceed twenty-one days. He pointed out specifically that all of the hospitals approved by the American College of Surgeons, or the majority of them, would probably enter into this arrangement, and that the group members would be hospitalized only upon the recommendation of their own physician. Since under this plan employed groups will be solicited by the Chicago Hospital Association, incorporated not for profit and representing all of the hospitals, there would be no direct solicitation by any hospital participating in the plan.

In the round table conducted by Doctor Leland, Dr. S. S. Goldwater, New York City; Dr. Christopher G. Parnall, Rochester General Hospital, Rochester, N. Y.; Paul Fesler, Wesley Memorial Hospital, Chicago, and many others joined in the discussion, and Doctor Smith was called upon to explain various details of the plan.

It was the consensus of opinion of those who participated in the discussion that the Chicago plan adequately meets the requirements of the American Medical Association in the matter of protecting the existing relationship of patient and physician, and that the plan should be carried out with the full approval of the staff members of the hospitals.

The subject of nursing was comprehensively discussed at a joint session of the council on medical education and hospitals of the American Medical Association and the American Conference on Hospital Service. Dr. Harry E. Mock, president, American Conference on Hospital Service, Chicago, was the chairman at this session.

The community or the state must find the way to make nursing service available to those who need it without the organization of training schools which produce innumerable poorly trained nurses who become a drug on the market after their years of hospital service. This was the pronouncement of Effie J. Taylor, professor of nursing, Yale University school of nursing, who gave the opening paper at this meeting.

Nursing education and nursing service should be two separate matters, but under the present system in which they are carried on together, neither is wholly adequate, in Miss Taylor's opinion. In spite of the fact that there is said to be an oversupply of nurses, Miss Taylor ventured the opinion that if adequate nursing service were supplied in all communities, the majority of capable nurses would be employed now.

C. Rufus Rorem, associate for medical services of the Julius Rosenwald Fund, Chicago, compared the cost of maintaining a staff of graduate nurses in a hospital with that of maintaining a nursing school whose students do much of the nursing. Mr. Rorem's calculations showed that a change from student to graduate nurses would probably cost hospitals more but the cost to patients would be less, as fewer special nurses would be required. This might not be a disadvantage to the hospital, however, he observed, as frequently the cost of special nursing affects the patient's ability to pay the hospital bill.

*Doctor Munger Speaks on Nursing*

Dr. George H. Coleman, Chicago, advocated public support of nursing education on the ground that public interest demands the most competent nursing profession possible. The policy of running hospital training schools for the service of student nurses should not be condoned any longer, he said. Doctor Coleman mentioned various plans now under trial for the provision of adequate nursing care to persons of moderate means, such as group nursing and hourly and visiting nursing.

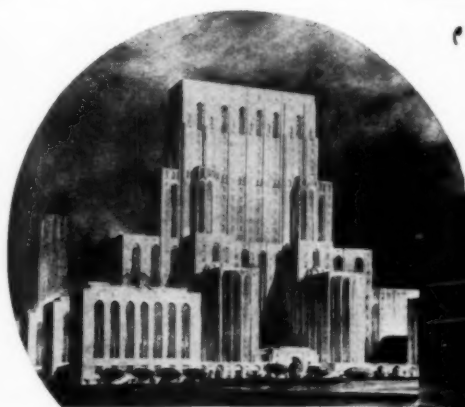
Dr. C. W. Munger, director, Grasslands Hospital, Valhalla, N. Y., the next speaker in the symposium on nursing, declared that hundreds of schools of nursing should be abandoned and thousands more should curtail their output if the present acute unemployment among nurses is to be alleviated.

Doctor Munger offered a number of suggestions for relieving the present situation and for preventing distress in the future. First, he said, nursing schools must no longer point with pride to successively larger classes each year, but must prove that a reasonable proportion of graduates may hope for employment. As a hospital administrator Doctor Munger frankly admitted that the presence of student nurses had paid hospitals well and in his opinion it would be an impossible financial burden to replace them with paid graduate nurses.

The American Conference on Hospital Service elected the following officers: Dr. John M. Dodson, honorary president; Gen. Merritte W. Ireland, surgeon general, U. S. Army, retired, president; Rev. A. M. Schwaitalla, first vice president; Dr. Ernest E. Irons, Chicago, second vice president; Evelyn Wood, Chicago, secretary; Charles A. Wordell, St. Luke's Hospital, Chicago, treasurer.

# Feeding 3,000

*"All in a day's work" with  
decentralized units like this!*



● The majestic 27-story home of the New York Hospital-Cornell Medical Center, New York City. This \$10,000,000 institution is one of the world's outstanding hospitals. Coolidge, Shepley, Bullfinch and Abbott, Boston, Mass., were the architects.

● Interior view shows a patients kitchen in the great new New York Hospital-Cornell Medical Center. It is one of many similar units which are part of a huge decentralized feeding system installed by the Arkay Company and designed to serve 3000 meals 3 times a day!

Study the equipment in this kitchen. Notice that nearly all of it has the softly reflective gleam of silvery metal...that modern "at your service" appearance. That's because it's made of Monel Metal. And it's the same throughout this hospital's food service department...Monel Metal everywhere that surfaces must be attractive, durable, easy-to-clean. 65,000 pounds of this modern equipment ready to give highest feeding efficiency at lowest cost for cleaning, maintenance and replacements!

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● View in one of the Patients Kitchens in the main hospital building showing Monel Metal equipment made and installed by THE ARKAY COMPANY, New York, N. Y. This equipment includes refrigerator cabinet, food trucks, Thermotainer roll warmer, steam table, coffee urns and urn stand.

## WHERE MONEL METAL EQUIPMENT WAS USED IN THIS GREAT HOSPITAL

Main Hospital Kitchen	Nurses Home Kitchens
Private Patients Kitchens	Nurses Home Cafeteria
Staff Kitchen	Nurses Home Employees Cafeteria
40 Diet Kitchens	Woman's Clinic & Pediatric Hospital Kitchen and Cafeteria
Ward Pantries	Private Patients Kitchen and Ward Pantries
Orderlies Cafeteria	Hospital Laundry
Nurses Cafeterias	Clinical Department
Students Cafeterias	
Psychiatry Hospital Kitchen	
Psychiatry Hospital Pantries	

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## NEWS OF THE MONTH (Cont'd)

## Western Hospital Group Discusses Economy Measures

REPRESENTATIVES from fourteen states and one province of Canada were in attendance at the seventh annual convention of the Western Hospital Association held at Long Beach, Calif., on February 22 to 25.

The first day's registration was over 500 which is the largest registration that has ever been recorded at a state or sectional meeting. For many months Dr. J. Rollin French, president, Golden State Hospital, Los Angeles, in charge of the general arrangements, has been writing letters, sending out programs and urging attendance, and the culmination of this excellent example of public relations was the most successful meeting that has ever been held outside of a national convention.

The program was designated as an economy program, and all of the subjects related to economy within the hospital or ways and means of promoting more efficient methods and greater occupancy.

A public meeting was held in the municipal auditorium on Wednesday evening which attracted 3,000 persons.

### *President Stephens Addresses Meeting*

The morning meeting opened with Dr. B. W. Black, president of the association, and medical director, Highland Hospital, Oakland, Calif., in the chair. Following a flag raising ceremony in recognition of Washington's birthday, the session commenced. The first general session was in charge of the honorary president, Dr. Malcolm T. MacEachern, associate director, American College of Surgeons. Dr. George F. Stephens, president, American Hospital Association, and superintendent, Winnipeg General Hospital, Winnipeg, Man., directed a particularly interesting talk on the inevitable changes in the hospital world. Doctor Stephens reported on what the American Hospital Association is doing in view of the present economic conditions, and described some of the recent activities of the association, such as the action taken by the trustees favoring group hospitalization, and the more recent action of the council of the American Hospital Association on group hospitalization as reported on page 88 of this issue.

Doctor Black then presented to the assembly the vital program of the relative responsibility of voluntary and tax supported hospitals. There is a bill pending in California to permit county hospitals to take private patients, and this is being generally opposed by the hospital group in California and the Western Hospital Association. Robert Warner, superintendent, Deaconess Hospital, Spokane, Wash., the next speaker, took as his topic, "Some Things Which Defeat Depression." Mr. Warner told how his hospital had taken time by the forelock and made its economic readjustment when the depression first started. In discussing Mr. Warner's paper, W. W. Rawson, superintendent, Thomas D. Dee Memorial Hospital, Ogden, Utah,

pointed out that in Ogden 80 per cent of the babies were born in hospitals, and he outlined the method of public relations as pursued in his city which had caused great popularity of the hospitals.

On Wednesday afternoon a public health demonstration was staged, with Dr. Fred B. Clarke, Academy of Medicine, Long Beach, Calif., presiding. At this meeting there were 5,000 people present, and besides several short addresses by public officials and a demonstration by the boy scouts of Southern California, motion pictures were shown.

The Western Hospital Association is built upon a house of delegates from the states and provinces that are included, and it was gratifying to note that all except two of the delegates were present at this meeting.

The dietetic symposium was held on Thursday morning in one hall, the physical therapists met in another hall, the record librarians met in a third hall and a meeting of the trustees of the association was held in still another hall. The assemblies on Thursday took up such topics as the insurance problem, food costs, public relations, the importance of records and other matters.

Friday was given over to a nurses' symposium, a session for the hospital social workers, housekeeping problems and other topics.

Besides those already mentioned, delegates from outside of the territory represented by the Western Hospital Association were C. Rufus Rorem, associate for medical services, Julius Rosenwald Fund, Chicago; Helen Beckley, executive secretary, American Association of Hospital Social Workers, and Howard Hodge, superintendent, Decatur and Macon County Hospital, Decatur, Ill.

## Methodist Hospital Association Endorses Group Insurance

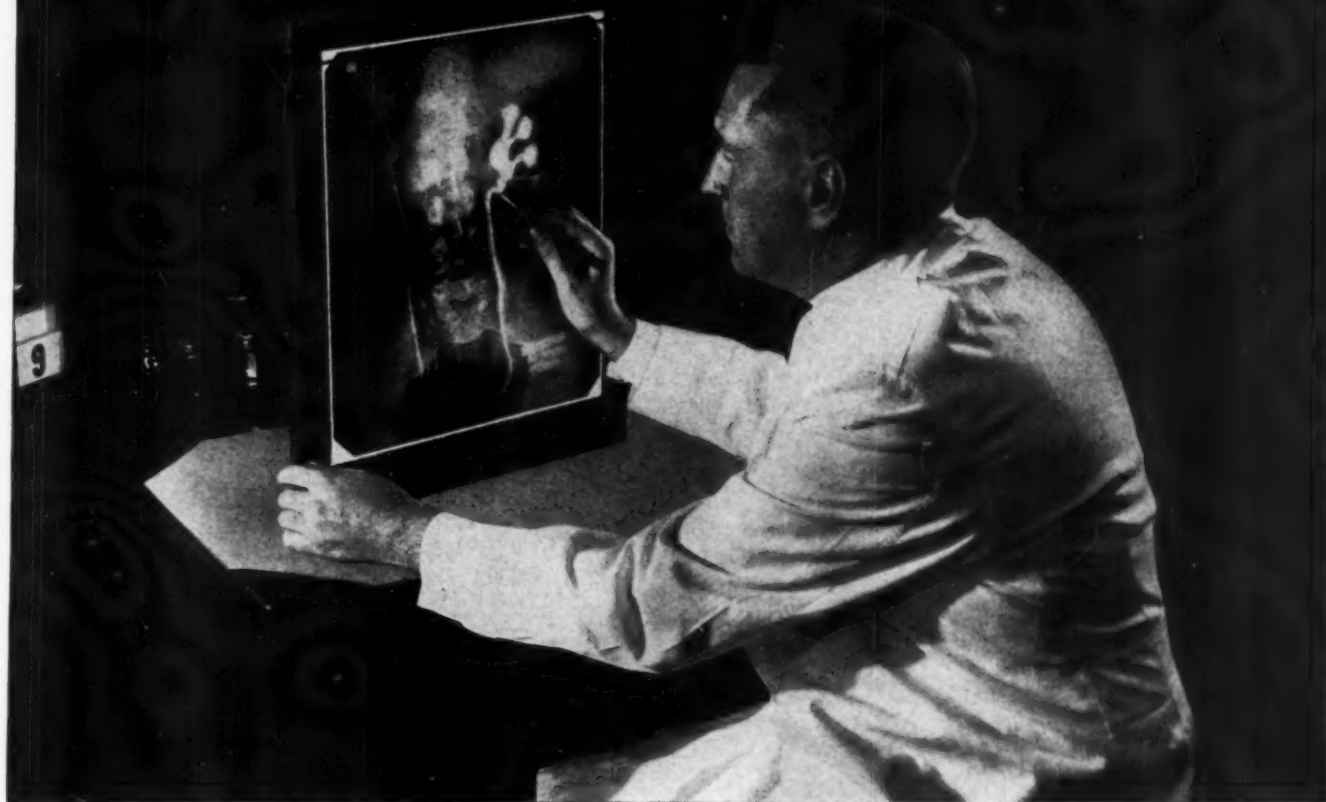
The meeting of the National Association of Methodist Hospitals, Homes and Deaconess Work was held in Indianapolis, February 15 and 16, 1933.

Doctor Herman Smith, superintendent, Michael Reese Hospital, Chicago, led a round table discussion on group insurance plans which lasted for nearly two hours. Those present seemed to be much interested; and resolutions were finally adopted to the effect that the hospital section of the Methodist Hospital Association endorse the plan known as the Chicago Plan, which has been endorsed by the American Hospital Association and many medical groups.

Another important subject on the program was public relations. The discussion on this topic was led by Dr. E. T. Thompson, administrator, James Whitcomb Riley Hospital



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## NEWS OF THE MONTH (Cont'd)

for Children, Indianapolis. It was voted to adopt the American Hospital Association's public relations program.

A paper entitled "Noise versus Quiet" was read by Ada Frost, assistant to the superintendent, Methodist Hospital, Indianapolis. R. V. Johnson, superintendent, Flower Hospital, Toledo, Ohio, led a discussion on the relations with the board of hospitals and homes of the Methodist Church.

In a discussion on the hospitalization of veterans, the association voted to endorse the program of the American Hospital Association in regard to this subject. In the matter of nursing, it was decided that each hospital should study its own situation, have cost studies made, and determine whether it was profitable to operate a school of nursing, which would meet the standards of the League of Nursing Education.

This meeting covered not only hospitals, but also the children's homes and the homes for the aged of the Methodist Church. The meeting was divided into three sections.

Paul H. Fesler, superintendent, Wesley Memorial Hospital, Chicago, was in charge of the hospital program. Mr. Fesler made a report at the final session, outlining the result of the meeting.

The following officers were elected for the ensuing year: president, Karl P. Meister, superintendent, Elyria Home for the Aged, Elyria, Ohio; first vice president, Paul H. Fesler, superintendent, Wesley Memorial Hospital, Chicago; second vice president, Rev. N. P. Glimaker, Chicago; third vice president, Frances Knight, Detroit; fourth vice president, Grace Steiner, Cincinnati. G. M. Hanner, superintendent, Beth-El Hospital, Colorado Springs, Colo., was reelected secretary; Rev. O. J. Carder, superintendent, Missouri Methodist Hospital, St. Joseph, Mo., was elected treasurer.

The association was entertained by the Indianapolis chamber of commerce and the Indiana Hospital Association. Bishop Ernest L. Waldorf of the Chicago area of the Methodist Church, was the principal speaker at the banquet.

The delegates were welcomed by Doctor Thompson, representing the Indiana Hospital Association. There was a good attendance from all divisions; and the meeting was highly profitable.

Rev. John G. Benson, superintendent, Methodist Hospital, Indianapolis, is president of the association. He has held this office for two years, and has made an outstanding success in the administration of his office.

## Dietitians of Illinois Assemble in Chicago

Approximately 150 dietitians assembled at the Belden-Stratford Hotel, Chicago, February 10 and 11, for the second Mid-West regional meeting sponsored by the Illinois Dietetic Association. A splendid program was presented under the chairmanship of Sarah Elkin, Mandel Clinics, Michael Reese Hospital, Chicago, president of the association.

Many interesting trips were made by those in attend-

ance to various hospital and hotel dietary departments. Social events enlivened the meeting and were well attended, particularly the annual dinner held by the Illinois Dietetic Association and the Chicago Dietetic Association. On this occasion Dr. M. T. MacEachern, American College of Surgeons, Chicago, gave an address on "Requirements for Food Service in Approved Hospitals."

The speakers at the various sessions and their topics were as follows: Dr. A. H. Parmelee, Rush Medical College, Chicago, "Newer Aspects of Infant Feeding"; Mrs. Thelma Porter Levin, associate professor of nutrition, University of Chicago, "Calcium Balance in Growing Children"; Dr. F. W. Tanner, University of Illinois, "Food Poisoning and Infections"; Dr. Solomon Strouse, Rush Medical College, "Newer Concepts in Dietary Management of Kidney Disease"; Adelaide Spohn, Chicago, "Organization of Nutrition Work—Emergency Relief"; Frances Swain, Chicago public schools, "Teaching Nutrition—School Lunchroom Aspect."

An exhibit of material from the library of the American Dietetic Association aroused much interest among the delegates.

## Nursing League Announces New Field Service

The National League of Nursing Education established in March, 1932, a department of studies headed by a nurse director, trained in the technique of making studies and working under the guidance of a specially appointed committee of nurse educators and administrators. Effie J. Taylor, R.N., president of the league, announces that at a recent meeting this committee uniformly agreed to promote a program of field service as one of its major activities for the coming year.

As a result of the findings of the Committee on the Grading of Nursing Schools, states and individual institutions are manifesting a desire to know more about their local conditions and are expressing the belief that an impartial examination can best be made by an expert from without the state. In some instances the state, working through its state association, state league and board of nurse examiners, may be desirous of having a survey made of the nursing schools in the state. In others, an individual hospital may be considering the discontinuance of its school and the introduction of a graduate service, or possibly a good postgraduate service, and may wish advice before taking action or setting up the new organization. The new field service of the league is available to any state or any institution desiring to have a study made. It will undertake studies relating to a particular phase of the nursing service or to the activity as a whole.

The single purpose of this service will be to study the particular situation sympathetically, constructively and at first hand. There is no fixed charge for this field service. Each study will be considered separately, and the league will endeavor to make the costs meet the available resources of the state or the institution requesting the study.

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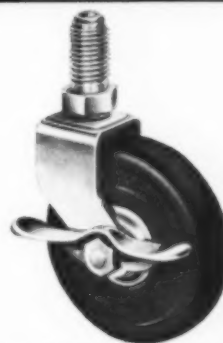
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Faultless Double Ball Bearing Steel Socket Caster fitted with  $\frac{3}{4}$ " U. S. Thread and hexagon nut, for fastening through iron brackets, etc. Cadmium finish. Any size or type of wheel for covered or hard floors. With or without brake.



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## NEWS OF THE MONTH (Cont'd)

## Coming Meetings

**American College of Surgeons.**

President, Dr. J. Bentley Squier, New York City.

Director general, Dr. Franklin H. Martin, 40 East Erie Street, Chicago.

Next meeting, Chicago, October 9-13.

**American Dietetic Association.**

President, Dr. Kate Daum, University of Iowa Hospital, Iowa City, Iowa.

Business manager, Dorothy I. Lenfest, 185 North Wabash Avenue, Chicago.

Next meeting, Chicago, October 9-12.

**American Hospital Association.**

President, Dr. George F. Stephens, Winnipeg General Hospital, Winnipeg, Manitoba, Can.

Executive secretary, Dr. Bert W. Caldwell, 18 East Division Street, Chicago.

Next meeting, Milwaukee, September 11-15.

**American Protestant Hospital Association.**

President, Rev. Thomas A. Hyde, Christ Hospital, Jersey City, N. J.

Executive secretary, Dr. Frank C. English, 3233 Griest Avenue, Cincinnati.

Next meeting, Milwaukee, September 8-11.

**Arkansas State Hospital Association.**

President, Monseigneur John P. Fisher, Director, Catholic Hospitals, Little Rock.

Secretary-Treasurer, T. J. McGinty, Davis Hospital, Pine Bluff.

Next meeting, Hot Springs, April 25-26.

**Florida Hospital Association.**

President, Dr. W. L. Shackelford, Good Samaritan Hospital, West Palm Beach.

Executive secretary, Fred M. Walker, Duval County Hospital, Jacksonville.

Next meeting, Ocala, March 27.

**Hospital Association of the State of Illinois.**

President, J. Dewey Lutes, Ravenswood Hospital, Chicago.

Secretary, E. I. Erickson, Augustana Hospital, Chicago.

Next meeting, Chicago, May 3-5.

**Indiana Hospital Association.**

President, George William Wolf, Lafayette Home Hospital, Lafayette.

Secretary, Gladys Brandt, Cass County Hospital, Logansport.

Next meeting, Chicago, May 3-5.

**International Hospital Congress.**

Next meeting, Knock, Belgium, June 28-July 3.

**Iowa Hospital Association.**

President, Clinton F. Smith, Allen Memorial Hospital, Waterloo.

Secretary, E. C. Pohlman, University Hospital, Iowa City.

Next meeting, Marshalltown, April 19-20.

**Midwest Hospital Association.**

President, John R. Smiley, St. Luke's Hospital, Kansas City, Mo.

Secretary, Walter J. Grolton, Missouri-Pacific Hospital, St. Louis.

Next meeting, Kansas City, Mo., May 26-27.

**Minnesota Hospital Association.**

President, James McNee, St. Luke's Hospital, Duluth.

Secretary-Treasurer, A. M. Calvin, Midway and Mounds Park Hospitals, St. Paul.

Next meeting, Minneapolis, May 25-26.

**Hospital Association of New York State.**

President, Boris Fingerhood, Israel Zion Hospital, Brooklyn.

Secretary, Julian Funt, Stuyvesant Park East, New York City.

Next meeting, Buffalo, May 19-20.

**North Carolina Hospital Association.**

President, Dr. R. B. Davis, Greensboro.

Secretary, Edwin G. Farmer, Carolina General Hospital, Wilson.

Next meeting, Charleston, S. C., April 5-7.

**Northwest Hospital Association.**

President, Dr. J. W. Efaw, Seattle General Hospital, Seattle, Wash.

Secretary-Treasurer, Rev. Axel M. Green, Emanuel Hospital, Portland, Ore.

Next meeting, Spokane, Wash., April 10-13.

**Ohio Hospital Association.**

President, Mary A. Jamieson, Grant Hospital, Columbus.

Secretary, J. R. Mannix, University Hospitals of Cleveland, Cleveland.

Next meeting, Columbus, May 2-4.

**Pan-American Medical Congress.**

President, Dr. Francisco M. Fernandez, Havana, Cuba.

Secretary general, Dr. J. E. Lopez-Silvero, Havana, Cuba.

Next meeting, Dallas, Tex., March 21-25.

**Hospital Association of Pennsylvania.**

President, John M. Smith, Hahnemann Hospital, Philadelphia.

Secretary, Howard E. Bishop, Robert Packer Hospital, Sayre.

Next meeting, Philadelphia, March 21-23.

**South Carolina Hospital Association.**

President, F. O. Bates, Roper Hospital, Charleston.

Secretary, H. H. McGill, Columbia Hospital of Richland County, Columbia.

Next meeting, Charleston, April 5-7.

**Hospital Association of the State of Texas.**

President, Mrs. Alice Taylor, All Saints Hospital, Fort Worth.

Secretary, Joe F. Miller, Jefferson Davis Hospital, Houston.

Next meeting, Dallas, March 17-18.

**University Hospital Executives Council.**

President, Robert E. Neff, University of Iowa Hospital, Iowa City, Iowa.

Secretary, John C. Dinsmore, University Clinics, Chicago.

Next meeting, Chicago, May 3.

**Virginia Hospital Association.**

President, Dr. John Bell Williams, St. Luke's Hospital, Richmond.

Secretary, M. H. Coleman, Jr., Johnston-Willis Hospital, Richmond.

Next meeting, Charleston, S. C., April 5-7.

**Wisconsin Hospital Association.**

President, Dr. R. C. Buerki, Wisconsin General Hospital, Madison.

Secretary, George Crownhart, State Medical Society, Madison.

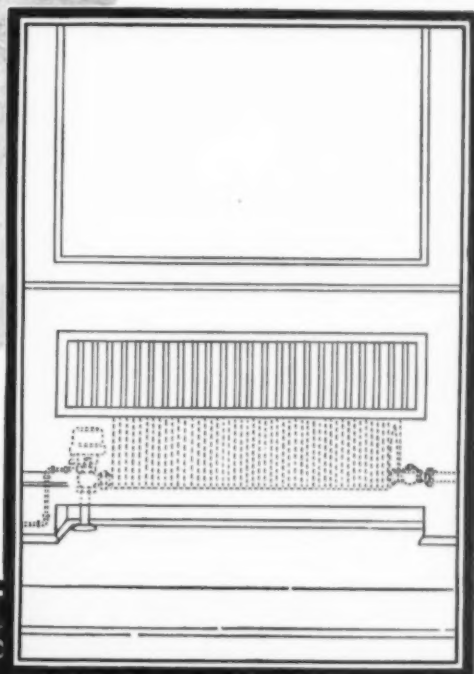
Next meeting, Chicago, May 3-5.

# Concealed Radiators are difficult to control by Hand!

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## NEWS OF THE MONTH (Cont'd)

## Dr. Winford Smith Addresses Crowded Nursing Meeting

On February 14 the Central Council for Nursing Education, Chicago, arranged a luncheon meeting for lay boards of hospitals and public health nursing organizations. The meeting was held at the Palmer House and drew a crowded attendance, approximately 400 representatives of the nursing, medical and hospital professions being present. Mrs. Ernest E. Irons, Chicago, presided.

The speaker was Dr. Winford H. Smith, director, Johns Hopkins Hospital, Baltimore, whose subject was "Future Trends in Nursing." Dr. Smith deplored the tremendous overproduction of nurses which has been going on for a number of years with little being done in a practical way to stem the tide. Too many schools are started simply because "it is the thing to do," he said, or to gain cheap service for the hospital. The training school is considered not as an educational institution but as a utilitarian department of the hospital. Nurses urgently need the cooperation of the medical profession and of all informed groups in correcting this situation. State nursing boards should be strengthened by the addition of personnel representing other classes of society and should be given more power to determine when a school should be started, Doctor Smith believes.

Weaknesses of the present system were pointed out by the speaker as being (1) the policy of inbreeding adopted by hospitals, who would benefit by bringing in graduates from other schools to fill vacancies; (2) too few and too poorly educated teachers; (3) too low entrance requirements for students; (4) a training largely restricted to the technique of bedside nursing, instead of a more liberal preparation for the nurse which would qualify her to enter other fields, particularly the ever widening fields of public health and industrial nursing.

Doctor Smith urged that more graduates be used for floor duty in hospitals, in order to raise the standard of floor duty nursing and make less necessary the use of special nurses. This would ensure steadier work and a surer income for nurses.

## Pennsylvania Hospital Association Announces Meeting Plans

The Hospital Association of Pennsylvania has completed the program for its annual meeting, which will be held in Philadelphia, March 21-23.

John M. Smith, superintendent, Hahnemann Hospital and Medical College, Philadelphia, president of the association, will preside at the opening session on Tuesday afternoon. Visits will be made during the afternoon to new hospital buildings opened in Philadelphia during the past two years.

The Wednesday morning session will be devoted to reports of the various committees, the president's address and a talk by K. Frances Cleave, nursing consultant,

Pennsylvania department of welfare, whose subject will be "How the Hospitals of Pennsylvania Are Meeting Their Nursing Problems."

There will be two round tables on Wednesday afternoon, and the association dinner will be held in the evening.

Among the addresses scheduled for Thursday morning are: "Modern Trends in Hospital Work," by Arthur A. Fleisher, president, board of trustees, Jewish Hospital Association; "The Hospital Housekeeper, Her Duties and Problems," by Doris L. Dugan, Jeanes Hospital, Fox Chase, Pa.; "Economies Effected by the Hospitals of Pennsylvania to Meet the Increased Demands on the Hospital by the Unemployed," by May A. Middleton, superintendent, Methodist Episcopal Hospital, Philadelphia; "The American Hospital Association," by George F. Stephens, superintendent, Winnipeg General Hospital, Winnipeg, and president, A. H. A.

The Thursday afternoon program includes the following addresses: "Hospital Service Plan," by Dr. Paul Keller, superintendent, Newark Beth Israel Hospital, Newark, N. J.; "How to Benefit From Statewide Publicity," by Harry Stanley, publicity director.

## Hospital Adopts Plan to Relieve Nurse Unemployment

Temple University Hospital, Philadelphia, in discontinuing its nurses' training class for the spring of 1933, has evolved a plan that is reported to be working out satisfactorily, both from the standpoint of the patient and the nurse.

Graduate nurses are assigned to general duty on the wards. In return for this service, the graduate nurse receives full maintenance, laundry and \$7.50 allowance a month. The graduate's name is kept on the registry during the period she is on ward duty. When called for a case, the nurse is released from ward duty, but she continues to occupy her quarters in the nurses' home. The nurse returns to general duty on the ward as soon as the case is completed, and her name again is placed on the registry.

These nurses work in twelve-hour shifts, with two hours off each day for recreation. They also receive half a day off a week and one-half day on Sunday. They are given free care in case of illness.

In order to be eligible for this service the nurse must agree to abide by the rules for the period of one year. In order to be released from her contract the nurse must present satisfactory evidence to the training school committee that she has an opportunity to improve her situation.

The advantages of the plan are as follows: (1) the nurse has no outside expenses while waiting for a private case; (2) she retains her place on the registry while waiting for work; (3) the number of nurses graduated is reduced, thus lessening the time between cases assigned to those on the registry.

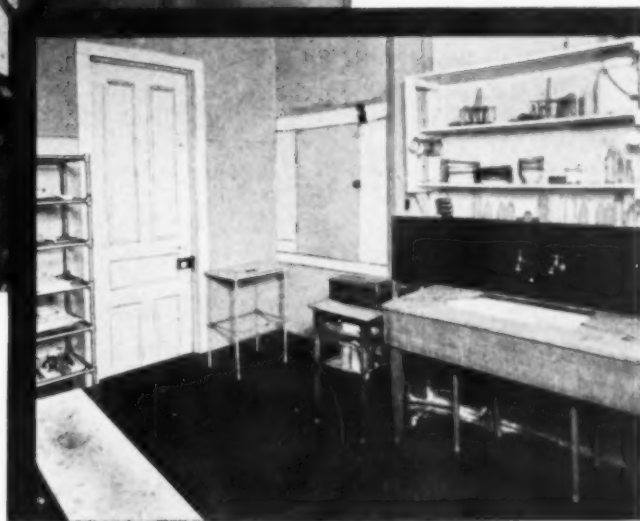
The plan has been in operation at the Temple University Hospital for several months, and up to the present, is solving the problem in a practical way.





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Covering and Sealex floorings have as one of their ingredients oxidized linseed oil, which gives these two materials the ability to resist bacteria growth.

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## PERSONALS

DR. F. O. HANSON has been appointed superintendent, Swedish Hospital, Minneapolis, to succeed WILLIAM MILLS, who has resigned, effective March 1. DOCTOR HANSON is a former superintendent of Iowa Lutheran Hospital, Des Moines, Iowa, and at present is a board member, Augustana Hospital, Chicago.

JANET M. GEISTER, director at headquarters, American Nurses' Association, has presented her resignation to the association's board of directors and asked to be relieved of her duties March 15. MRS. ALMA H. SCOTT, the associate director, will carry on the director's duties for the present.

DR. GEORGE W. STEPHENS has resigned as superintendent, Arizona State Hospital, Phoenix, Ariz.

MARY FRANCES HARTNETT has been elected superintendent, Clark County Hospital, Winchester, Ky., to succeed BETTY HARDING, who was elected to the office temporarily, following the resignation of KATHERINE DRENNON.

DR. ROBERT E. BALDWIN, superintendent, Tampa Municipal Hospital, Tampa, Fla., died February 2.

MAYME A. PECK has resigned as superintendent, West Hudson Hospital, Arlington, N. J., which position she had held the last five and one-half years.

MADGE PORTER has been named superintendent, Wahpeton Hospital, Wahpeton, N. D., succeeding EMMA GRABARKEWITZ, who has resigned. MISS PORTER has served as night superintendent, Kansas City General Hospital, Kansas City, Mo., and she has held positions as superintendent and superintendent of nurses in Rockford, Ill., Colorado Springs, Colo., and in hospitals in other cities.

MRS. NAN EWING has been appointed superintendent of nurses, Toledo Hospital, Toledo, Ohio. She assumed her new duties in February. Mrs. Ewing was formerly connected with Cook County School of Nursing, Chicago.

DR. W. F. DUNHAM is the new superintendent, Muscatuck Colony, Butlerville, Ind.

DR. MAX E. WITTE, in charge of Clarinda State Hospital for Insane, Clarinda, Iowa, for the past thirty-four years, died on January 29. DOCTOR WITTE was seventy-three years of age at the time of his death.

J. C. SMITH was recently appointed superintendent, Robinson Memorial Hospital, Ravenna, Ohio.

ANNA BRAND, who was recently appointed superintendent, St. Louis County Hospital, Clayton, Mo., to succeed the late DR. EUGENE A. SCHARFF, whose death occurred January 11, is no longer associated with the institution.

MILDRED COLLINS, a member of the nursing staff at Elizabeth Hatton Memorial Hospital, Grand Haven, Mich., for the past three years, has been appointed acting superintendent of the hospital. WILHELMENA KAPITEYN resigned recently as superintendent of the institution.

MRS. ETHEL P. CLARKE, director, school of nursing, Indiana University, Indianapolis, has been appointed superintendent of nurses, Bridgeport Hospital, Bridgeport, Conn.

DR. WILLIAM MCQUEEN has been named superintendent, Sunnyside Sanatorium, Oaklandon, Ind., succeeding DR. H. V. SCARBOROUGH, who resigned recently. DOCTOR MCQUEEN has served as assistant superintendent and medical director of the institution for the past twelve years.

DR. P. C. TURNER has been named superintendent, General Hospital No. 2, Kansas City, Mo.

DR. ADRIAN S. TAYLOR was recently appointed superintendent, Clifton Springs Sanitarium, Clifton Springs, N. Y. For the past five years DOCTOR TAYLOR has been practicing surgery in Birmingham, Ala. Previous to that he was professor of surgery, Peking Union Medical College, Peking, China, which is conducted by the Rockefeller Foundation.

STUART G. ALDHIZER has been named superintendent, Rockingham Memorial Hospital, Harrisonburg, Va.

MARY BROWN-LEWERS has become superintendent, Jackson-Lake Hospital, Oakland, Calif.

NELLIE G. BROWN, who has been acting superintendent, Ball Memorial Hospital, Muncie, Ind., since the death of HAROLD K. THURSTON, superintendent, was recently named superintendent of the institution.

DR. TRUMAN C. TERRELL has assumed the superintendency, Methodist Hospital, Fort Worth, Tex.

CHARLOTTE F. LANDT, formerly assistant director, school of nursing, University of Colorado, has recently assumed the superintendency of the Memorial Hospital of Natrona County, Casper, Wyoming.

DR. PAUL WAKEFIELD has been appointed superintendent, Central Maine Sanatorium, Fairfield, Me. DOCTOR WAKEFIELD was until recently chief of the state clinics for childhood tuberculosis in Massachusetts.

MISS A. J. BURGESS has resigned as superintendent, Strathroy General Hospital, Strathroy, Ont. Her resignation took effect February 1.

DR. JOSEPH S. STUART, assistant superintendent, Ontario Hospital, Orillia, Ont., has been appointed acting superintendent of the institution, succeeding DR. W. C. HERRIMAN, who has retired from the government service.

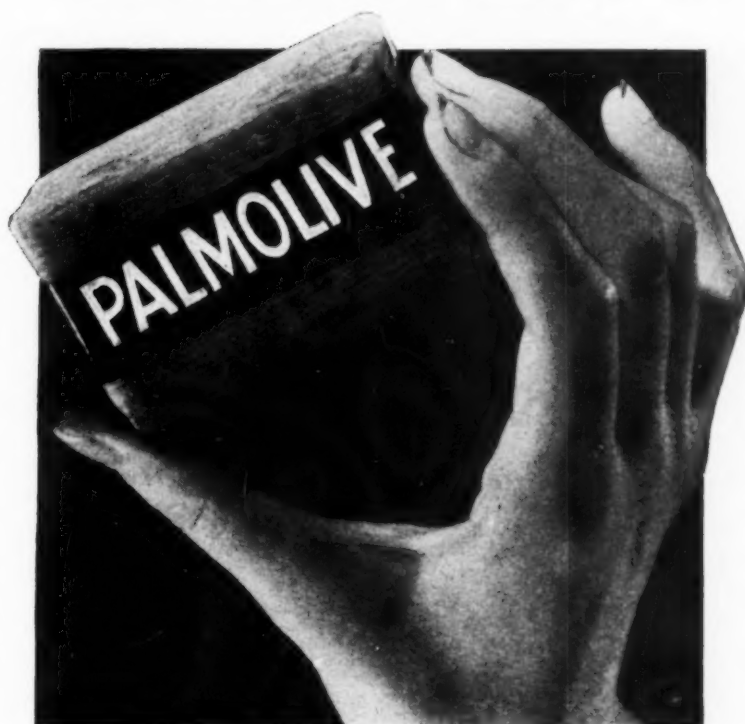
ADELAIDE PERRY, Johnson City, Tenn., has been made instructress of nurses, Asheville Mission Hospital, Asheville, N. C.

## MacEachern Made Fellow of College of Physicians

Among those who were honored with a Fellowship in the American College of Physicians, as announced at the organization's meeting in Montreal, February 7, was Dr. Malcolm Thomas MacEachern, associate director, American College of Surgeons, in charge of hospital activities.

Doctor MacEachern's work in the hospital field over a long term of years and his exceptional organizing ability have won for him this additional honor.

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**P**ATIENTS appreciate the thoughtfulness of the hospital that provides Palmolive. For Palmolive is the soap that most of them use at home. Millions prefer it because it is the one large-selling soap made with olive oil. And everyone knows the value of olive oil in skin care.

Palmolive is an unusually pure soap, worthy of your choice. It is made of vegetable oils exclusively, being a scientifically saponified blend of olive and palm oils. It contains no other fats whatsoever. Mild and abundant lather—it contains no artificial coloring matter.

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**A** perfect Anesthesia—smooth induction

—smooth awakening—No respiratory irritation—Minimum of nausea and discomfort.

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"The purer the Ether, the safer and better the Anesthesia."

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## American Dietetic Association Will Meet in Chicago

The American Dietetic Association has announced that its annual meeting will be held in Chicago, October 9-12. This year's meeting, which will be the sixteenth annual gathering of the association, will be held at the Palmer House. M. Faith McAuley, University of Chicago, has been appointed program chairman.

## A. H. A. Council Asks for Information

The council on community relations and administrative practice of the American Hospital Association wishes to place itself in communication with the officials of local or community hospital councils throughout the country, and requests that the officers of local councils send in immediately the names of their respective organizations, accompanied in each case by a brief statement of the declared objects of the organization, its present functions, the date of its establishment, the names of participating hospitals and the names of its officers.

There appear to be two types of local or community hospital associations: first, those that have been charged with important cooperative functions which are exercised through a central office (the Cleveland Hospital Council is a conspicuous example of this type), and second, those which while conscious of a community of interests have progressed in their organization no farther than the conference or resolutions stage. The council of the A. H. A. wishes to establish contact with both groups.

The council would appreciate in addition information relating to contemplated activities in the sphere of local hospital cooperation which as yet have taken no definite shape. The council also desires information concerning cooperative efforts of hospitals which are incidental to the functioning of local community chests or welfare federations.

Communications in response to this appeal should be addressed to Dr. S. S. Goldwater, Chairman, Council of the American Hospital Association, 1212 Fifth Avenue, New York City.

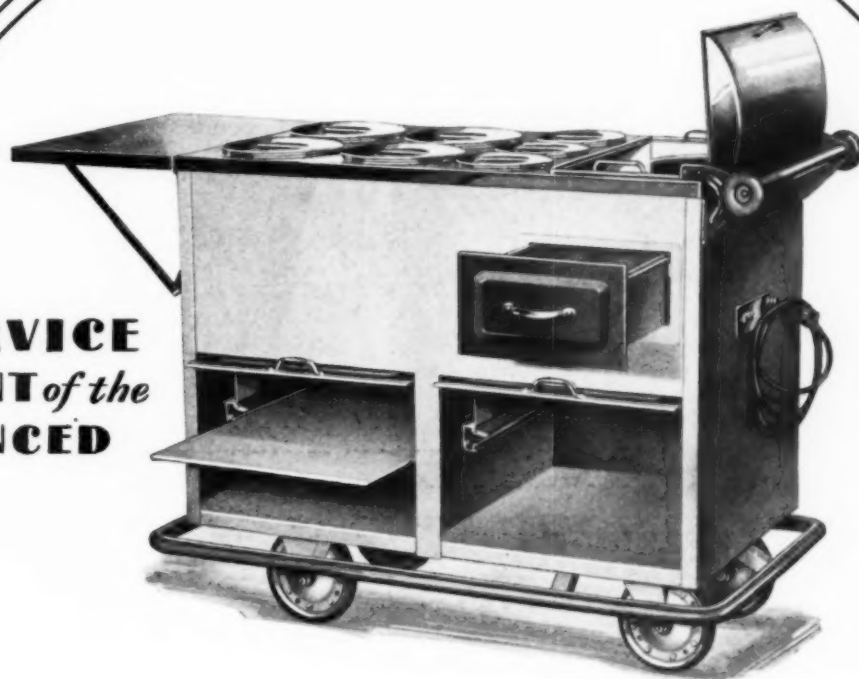
## New York Hospital Executives Seek Funds for Indigent Care

The officers and board of trustees of the Hospital Association of New York State met recently in New York City to discuss plans for meeting the greatly increased demands on voluntary and public hospitals for free service. The meeting was presided over by Boris Fingerhood, president of the association and superintendent, Israel-Zion Hospital, Brooklyn.

Mr. Fingerhood described the association's plan to appeal to the Council of New York Mayors in an effort to secure an amendment to the Temporary Emergency Relief Bill. Under the proposed amendment state aid to municipalities would include the relief work done in hospitals. Under the present law the state provides 40 per cent of the monies expended by the municipalities for emergency relief, for purposes of home relief only.

The proposed lien law, which is intended to protect the interests of the hospitals of the state in the matter of compensation cases, was also discussed at the meeting.

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**N**OW, as always, Colson leads the field in the development and improvement of Portable Hospital Equipment. Whether it be Food Conveyors, Wheel Chairs, Bed Casters, or any of the many items for Institutional use in the Colson line, if it bears the Colson name, that is your guarantee that the quality, workmanship and design are unsurpassed . . . that the equipment will render more years of uninterrupted service per dollar cost than any other you can buy.

Colson products are sold only by authorized representatives of The Colson Co., Elyria, O., the only manufacturers of Colson products. If you don't have the latest complete catalog of Colson Equipment in your file, write today.

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BACK PLASTERS AUTOMATICALLY  
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Pittsburgh  
(NATIONAL)  
Reinforcement  
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BUILD FOR PERMANENCE

## Washington Dietetic Association Holds Meeting

The January meeting of the Western Washington branch of the American Dietetic Association was held at the Washington Athletic Club, Seattle, January 20. Darwin Meisner, manager of the club, spoke on business administration. After a brief discussion, Margaret Coughlin, the dietitian at the club, told something about her work. A trip through the dietary department of the club followed.

## Registered Nurses in Toronto Reduce Fees

A cut of approximately 17 per cent in registered nurses' fees became effective in Toronto, Ont., the first of the year. Only nurses doing private nursing are affected by the cut, as most hospital nurses in the city had their salary reduced about a year ago.

Under the new rate, \$5 is charged for a day or night service for a twelve-hour period, and \$6 is the fee for twenty-hour service. The former rates were \$6 for a twelve-hour day and \$7 for twenty hours.

## Southern New York Superintendents Hold Second Meeting

The recently organized Association of Hospital Superintendents of Southern New York State held its second meeting at the Binghamton City Hospital, Binghamton, N. Y., on January 18. It was decided that in the future the association will meet quarterly.

The following questions were considered at the round table discussion: hospital charges and methods of collection; the effect on hospitals of the report of the Committee on the Costs of Medical Care; the admission of patients; the public welfare law relating to the collection of bills from counties and towns for charity cases; compensation cases; finances and possible means of help; proper rates to charge local welfare cases and out of the county welfare cases.

A resolution was adopted asking that a part of the state fund for the care of the needy be made available to hospitals for the care of the indigent sick.

The invitation of Emma M. Liphardt, superintendent, Geneva General Hospital, Geneva, N. Y., to hold the next meeting at that institution was accepted. The meeting will be held the third Wednesday in April.

At the organization meeting of the association, William E. Proffitt, superintendent, Tompkins County Memorial Hospital, Ithaca, N. Y., was elected chairman, and Robert L. Eckelberger, superintendent, Charles S. Wilson Memorial Hospital, Johnson City, N. Y., was elected secretary of the association.

## Michael Reese Hospital Institutes Book Fund

The Michael Reese Hospital, Chicago, recently announced the institution of the Heliodor Schiller Memorial Book Fund. This fund was created in honor of the late Dr. Heliodor Schiller by his friends and colleagues.



# It makes BETTER TOAST

**C**RUNCHY, golden-brown toast—soft, delicious inside—that's the sort of toast the Savory radiant gas Toaster makes *every time*.

The Savory is fully automatic, it is inexpensive to install and operate, and never *burns toast*—three of the many reasons why leading hospitals throughout the country are fast accepting the Savory as "standard" in their diet kitchens.

Write for full particulars to Savory, Inc., Dept. MH-3, 591 Ferry Street, Newark, N. J.

## SAVORY radiant gas TOASTERS



**THE SAVORY MODEL P.S.** is being installed in diet kitchens in many of the country's leading hospitals.

*Other sizes to meet every need.*

## BURDICK DIATHERMY

**Capacity**

**Smoothness**

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of Control**



Showing the Burdick Diathermy as used for the production of heat in chest conditions, including pneumonia.

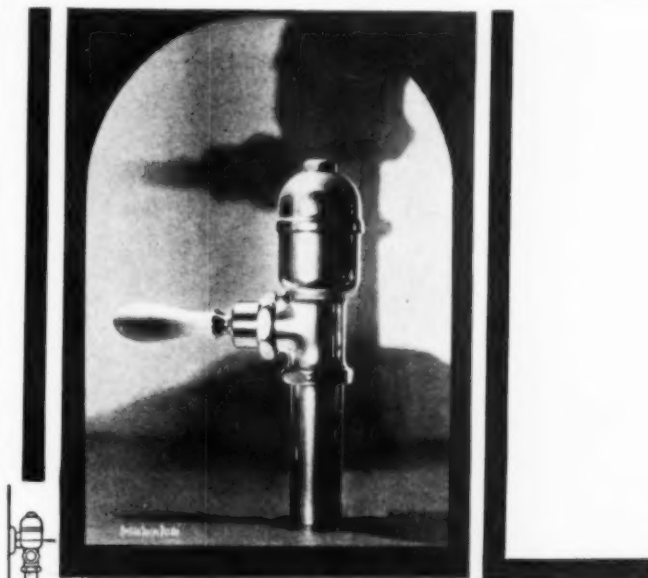
**T**HE Physician, Surgeon, and Specialist will find the Burdick Diathermy of ample capacity for the full range of medical and surgical diathermy work. It combines greater ease, smoothness and finer precision of control than any other diathermy instrument in its capacity range.

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**THE BURDICK CORPORATION**

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**SLOAN**  
FLUSH VALVES  
FOR MODERN HOSPITALS



Baked banana is now part of the popular vegetable plate

## Bananas BELONG in Hospital Diets

A RECENT writer for a leading hospital publication strongly recommends bananas because they are so agreeable and so well adapted to the digestion of sick people. As a matter of fact, there is scarcely a food on the hospital diet list which, for the money, combines and gives so much in nourishment . . . vitamins . . . minerals.

Bananas have an important place in fruit cups, fruit salads and are delicious and easy to serve as a vegetable—sautéed, broiled or baked.

Sliced bananas will retain their natural color for several hours if they are first kept for half an hour in a heavy, simple syrup (in the ratio of  $1\frac{1}{2}$  cups of sugar to 1 cup of water). When used with canned fruits, sliced bananas will not discolor if covered with the syrup from the can. The easiest, most effective way is to place the sliced bananas in the bottom of the container, with the canned fruits on top. Always use a silver or stainless steel knife for slicing . . . Coupon brings recipes for both quantity and individual serving. Send today.



The high food value and easy digestibility of the banana have been recognized by the Committee on Foods of the American Medical Association, and its acceptance seal granted for use in advertising by the United Fruit Company.



Banana orange juice cocktail



Bananas wrapped in bacon, then broiled

UNITED FRUIT COMPANY  
Educational Department, 1 Federal Street, Boston, Mass.  
Please send new booklet of quantity and individual recipes,  
together with new Bibliography of Food Value of the Banana.

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M.H. 5-33

## Edward F. Stevens Organizes New Architectural Firm

The architectural firm of Stevens & Lee, Boston and Toronto, of which Edward F. Stevens was senior partner, has been dissolved. Mr. Stevens will continue the practice of architecture, specializing as heretofore in the planning of medical institutions, under the name of Stevens, Curtin & Mason. The new firm will maintain offices at 45 Newbury Street, Boston. George A. Curtin and Herbert G. Mason are Mr. Stevens' associates.

The German Society for Building Industry, Berlin, recently honored Mr. Stevens by appointing him a corresponding member of the organization.

## New England Hospital Association Holds Good Meeting

The New England Hospital Association held its eleventh annual meeting on February 17 and 18, at the University Club, Boston. There was a great amount of interest expressed in all phases of the activities and in all of the papers, and 224 persons were registered at the meeting.

The membership committee reported fifty-eight new members acquired during the year.

The following officers were elected: Scott Whitcher, superintendent, St. Luke's Hospital, New Bedford, Mass., president; Albert W. Buck, superintendent, New Haven Hospital, New Haven, Conn., vice president; Albert G. Engelbach, Massachusetts General Hospital, Boston, secretary-treasurer; Bertha W. Allen, superintendent, Newton Hospital, Newton Lower Falls, Mass., trustee.

## Discontinues Nurses' School; May Adopt Postgraduate Plan

The New York Post-Graduate Medical School and Hospital, New York City, after fifty years of conducting its school of nursing on the undergraduate basis, is retiring from that field, it was announced February 6, following a meeting of the board of directors. The institution has under advisement a plan for entering the field of postgraduate nursing education. It was further announced that future plans for nursing education at the institution will be developed in conference with Columbia University. Plans for forward steps in nursing education are to be pushed during the coming year.

Future development of nursing education at the Post-Graduate Hospital will be parallel to the postgraduate teaching of physicians which has been the special field of the institution since it was founded in 1882.

In line with the action of the board of directors, no class of undergraduate pupil nurses will be accepted in March, 1933, or thereafter. The classes now in training will be continued through to graduation. The last graduates to receive diplomas from the school will be the class of 1935. When the last class is graduated, the New York Post-Graduate Medical School and Hospital will have prepared for the profession of nursing 1,438 women.

This action of the Post-Graduate Hospital is in line with recommendations contained in the report of the American Nursing Association for 1932, which calls attention to the serious economic condition due to the oversupply of nurses and the need for postgraduate education.

*"What about the other eight brands in this test? Were they just shoddy?"*



**The United States Testing Co.  
Test No. 54,947 PROVED**

1. Pequot was strongest before washing
2. Pequot was strongest after 100 washings
3. Pequot was most uniform in strength
4. Pequot was most uniform in weight
5. Pequot had least "sizing"
6. Pequot had less than average shrinkage.

THIS question was actually raised by one buyer in discussing the U. S. Testing Company's report on relative quality of 9 leading brands of sheets.

"Why don't you name names?" he asked. "Were the other sheets just a lot of vague 'nobodies'?"

The full names of all the sheets tested are a matter of record which is open to anyone who has serious doubts on this point. You can probably name all of them offhand.

The other 8 brands are *not* shoddy. The makers are *not* "nobodies." As we specifically stated, they are the "eight other best-known trade-marked brands of sheets in the 68/72 or comparable constructions sold competitively with Pequot."

The fact that the U. S. Testing Co. bought 10 samples of each of these brands, in stores, in 24 different cities, and tested impartially, without selection or rejection, makes the test an authoritative comparison of these leading brands.

**Searching Questions Welcomed**

No wonder you're skeptical about tests of sheeting quality! So many have been hasty or incomplete—so many flatly contradict each other!

Be hard-boiled! The deeper you probe, the clearer it will be to you that this test of sheets was conducted

with absolute impartiality—according to the most rigid scientific principles. A folder describing the methods used in the test and the official summary of results of the laboratory, will be sent you on request.

The great superiority of Pequot is a *proved* fact. It is a strong reason to standardize your bedlinen purchases on Pequot exclusively. Your wholesaler or supply house will quote prices.

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# 7 REASONS WHY You Should Insist upon ONEIDA SECTIONAL PLATE



1. The Oneida trade-mark means quality.
2. Modern designs of fine simplicity set off your table.
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4. A heel of quadruple silver reinforces all staple pieces at point of hardest use.
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7. It costs no more, with Oneida Sectional Plate, to do it right.

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...that most of the leading hospitals are specifying J&J Shock Absorbing Casters for all their new equipment and replacements.

...Why? Because these casters and these alone—have rubber expanding applicators that absorb all shocks when equipment is rolled on and off elevators, over thresholds, etc.—give patients *extra* comfort—cannot split or in any way damage tubular legs. These are mighty important features—and they will help you save money.

...Try a set on your own beds—we'll be glad to send them to you on approval. Just tell us what style and size you want—1½", 2", 3", 4", or 5" for round, square or graceline tubing.

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102 SO. MAIN ST. PALMER, MASS.  
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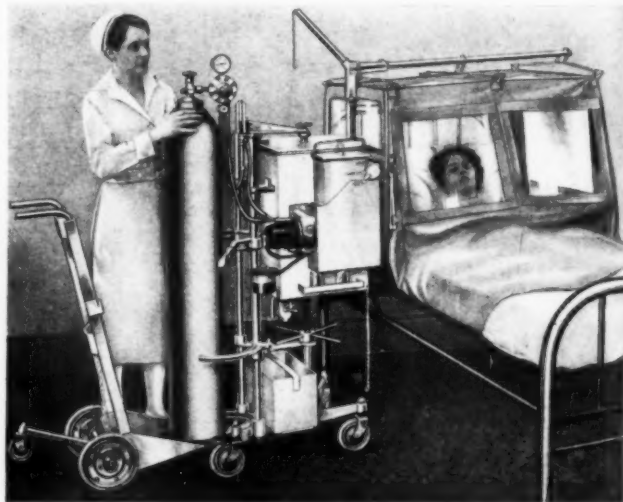
## NEWS FROM MANUFACTURERS

### AN IMPROVED OXYGEN TENT

The demands of oxygen therapy have grown steadily each year and with its increased use new requirements have developed. Medical research has opened new fields that have made improvements in oxygen therapy equipment imperative. The third model of oxygen tent made by the Heidbrink Company, 2633 Fourth Avenue, South, Minneapolis, is a development occasioned by past experience and new demands. A brief summary will indicate some of the innovations achieved in this equipment.

The hood is made of sheeting that is rubberized on both sides, and has eight noninflammable cellulose acetate windows of ample size. Plenty of material is allowed in the skirt for tucking underneath the mattress, and there are two sleeves for passing dishes and containers into the tent.

The hood is supported by three spring hangers that prevent tearing in case of an accidental pull. The fact that



the hangers are movable makes it possible to collapse the tent to one-half its size for use over an infant's crib, thereby saving oxygen. When not in use the tent may be collapsed to a six-inch width.

The metal hangers that support the hood are mounted on a horizontal bar that tilts to a forty-five degree angle. This prevents the bottom of the skirt from dragging across the patient's face. The entire operation of adjustment may be done by one nurse.

The ice box holds sixty-five pounds of ice, which is a sufficient supply for an overnight run. The ice box is connected directly to the tent, and the opening has an adjustable rubber flap that is operated from the outside. This permits variation in cooling and regulation of drafts. The air circulation within the ice box is so regulated that the melted ice water serves as a cooling agent, thus lowering the ice consumption.

The motor and the blower are of the low speed type, and both are cushioned on rubber to avoid vibration and motor hum. A coil type rheostat provides a wide selection in the rate of speed of the motor and the blower.

The soda lime container is mounted on the exterior of the ice box for convenience in filling and emptying. A switch control regulates the circulation through the soda

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The new Wills Eye Hospital, Philadelphia, Pa., has chosen Garland Heavy Duty Gas Ranges for its kitchen because of their efficiency and economy. Installation by Ranson-Barton Company.

Hospital kitchen  
costs are reduced by

# Garland

## Heavy Duty Gas Ranges



**Garland No. 45-28**

Sanitary and easily cleaned, as well as economical, this Garland Heavy Duty Gas Range meets hospital standards. Smooth front—manifold, hinges and door springs concealed. Enameled oven linings—very easily kept clean, will not rust. Balanced oven door—extra heavy, will not warp.

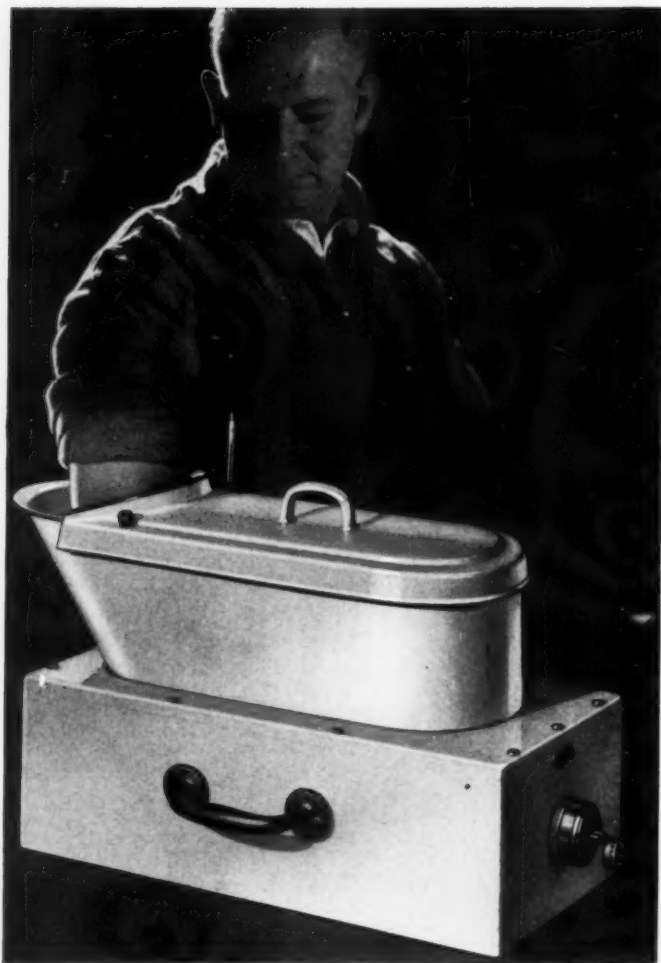
• • • Faced with the need for reducing kitchen expense without decreasing capacity, hospital after hospital has turned to Garland Heavy Duty Gas Ranges. In these modern ranges, economy is effected through increased efficiency. For instance, the all hot top, by eliminating wasteful cool spots, provides extra cooking capacity at no extra fuel cost. The oven is another example of economy through efficiency. Although the oven is unusually capacious, fuel consumption is held to a minimum by dependable heat control and by extra heavy, 1½ inch insulation. Investigate the possibility of reducing kitchen costs in your hospital. Write for the Garland catalog.

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### Simplifies Treatment of Infections of Hand and Arm

Constant temperatures—relatively low—are both highly important and difficult to maintain in the treatment of infections of the hand and arm.

The Will Ross Arm Bath Temperature Control assures constant temperature maintenance over long periods of time with the very minimum of attention. A standard enamelware arm bath is set into a specially designed cabinet equipped with three heating elements controlled by a three point switch. This provides low, medium or high heat as desired and will hold the solution at any pre-determined temperature. An occasional reading of the thermometer is all the attention required on the part of nurse or attendant.

The arm cannot be scalded, shocked or burned. The method is safe, convenient and accurate. Equipment can be used on any 110 volt circuit—direct or alternating. Heating elements, standard Mazda lamps, easy to replace.

Moderately priced, the Will Ross Arm Bath Temperature Control will save its cost again and again.

WILL ROSS, INC., WHOLESALE HOSPITAL SUPPLIES  
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lime container, which may be a total, a partial or an entirely by-passed circulation.

The oxymeter is of the pressure regulator type, and has one gauge to register the tank pressure and another gauge calibrated in liters of oxygen flow from one to fifteen. An automatic emergency flush valve is used to fill the tent with oxygen when the patient is first installed. Visible indication of the oxygen flow is provided by circulating the gas through a water bottle.

The entire apparatus is mounted on a single chassis which has four large rubber tired, ball bearing casters. The chassis accommodates a tank truck so that tanks may be inserted or removed without the necessity of lifting them. The tank is retained in place by an arm lock arrangement.

The apparatus may be adjusted either up or down so that the patient may rest in an upright or in a reclining position.

Provision is made for the addition of the attachment used in the controlled delivery of carbon dioxide.

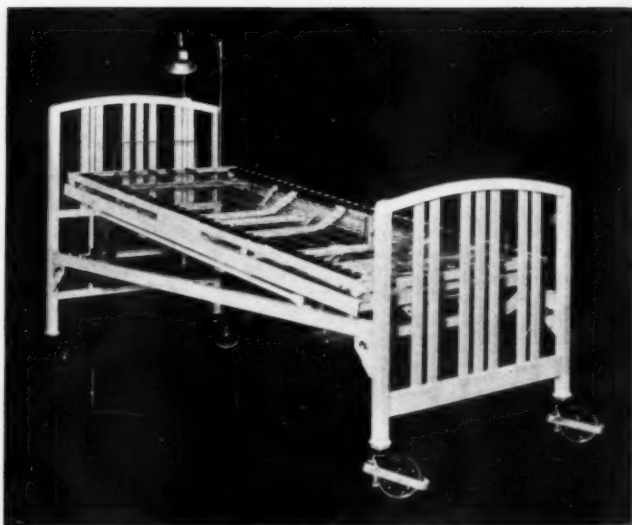
A combination carbon dioxide and oxygen analyzing outfit will analyze for both oxygen and carbon dioxide concentration from the same sample of air. The procedure can be accomplished in five minutes.

#### A NEW HOSPITAL BED FOR VARIED POSITIONS

The new hospital bed made by the Simmons Company, 222 North Bank Drive, Chicago, embodies the facilities of four separate types of beds, the flat horizontal bottom, the posture bottom, the tilted bottom, and the variable height flat horizontal bottom.

In the flat horizontal bottom position the mattress rests on a spring support, the standard height of the mattress being 27 inches from the floor.

In the posture bottom position the mattress support may be placed in the various angles required to provide a back



rest, either with or without the knee flexed position, or for the Fowler position. These positions are easily obtained by operating a crank shaft at the foot of the bed.

The tilting bottom may be used to provide the Trendelenburg position. The bottom of the bed may be raised at the head without disturbing the height of the foot where it is desired to place the patient in a prone position with his head higher than his feet. The bottom of the bed may be raised at the foot without disturbing the height of the head, thus placing the patient in a prone position with his feet higher than his head. Transverse crank shafts at the side of the bed are used to obtain these positions.

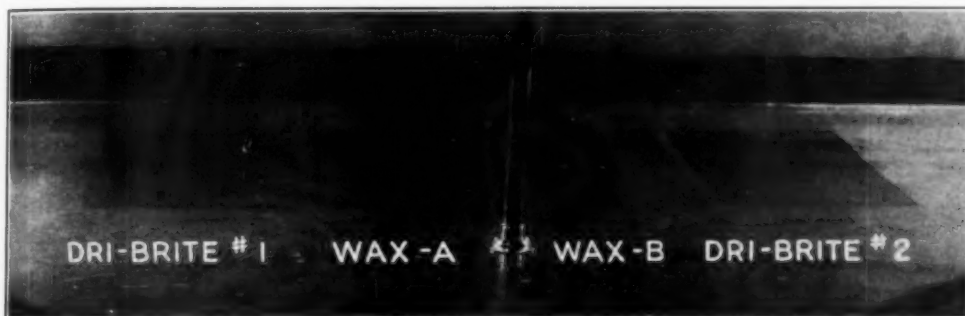


# Which wax WEARS LONGEST?

## Here Are the Facts!

Completed wear tests\* on Dri-Brite and two other nationally known liquid floor waxes were recently made by Foster D. Snell, Inc., Chemists—Engineers of Brooklyn, N. Y. A Brooklyn cafeteria serving 2000 people a day was selected as the proving ground. Areas 3 ft. wide by 2 ft. long on the runway where each person purchasing food passed, were waxed with iden-

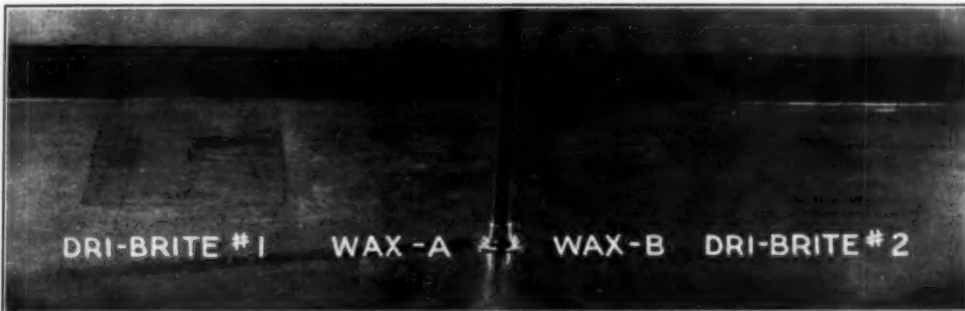
tical quantities of Dri-Brite, Wax "A" and Wax "B". Dri-Brite was applied without rubbing or polishing. Wax "A" and Wax "B" were applied and polished up, according to the instructions of their manufacturers, until all areas had a satisfactory appearance. Photographs were taken, first, before any person walked on the floor and, second, at the end of the day's business.



### Cafeteria Floor Before Test

(Unretouched Photo)

Note that there is little difference between the three waxes. Dri-Brite #1 shows a slightly higher gloss probably due to the condition of the floor at this particular spot. All areas, however, had a brilliant lustre.



### Cafeteria Floor After Test

(Unretouched Photo)

The two Dri-Brite areas retained their gloss and showed appreciably less wear than Waxes "A" and "B". The latter showed foot prints more noticeably and became dulled by dirt quicker than Dri-Brite.

There is a definite reason for the wear-resisting qualities of Dri-Brite. Analytical tests by Foster D. Snell, Inc. show that of the three waxes tested Dri-Brite contains the most carnauba wax and moreover the largest percentage of carnauba wax on a basis of the film-forming ingredients. Carnauba is by far the hardest of the polishing waxes and therefore the amount of this wax present has a vital bearing on performance in actual service.

\*Full details of the above test and data on the wax contents compared are available by writing to Foster D. Snell, Inc., 130 Clinton Street, Brooklyn, N. Y.

# DRI-BRITE

# Liquid WAX

*A Secret, Unduplicated Formula*

### FREE — Make Your Own Test

MH 3-33

MIRACUL WAX CO.  
1322 Dolman St., St. Louis, Mo.

I should like to conduct a wear test on my own floor. Please send me free of charge a can of Dri-Brite with full instructions for use.

NAME.....

BUILDING.....

CITY..... STATE.....